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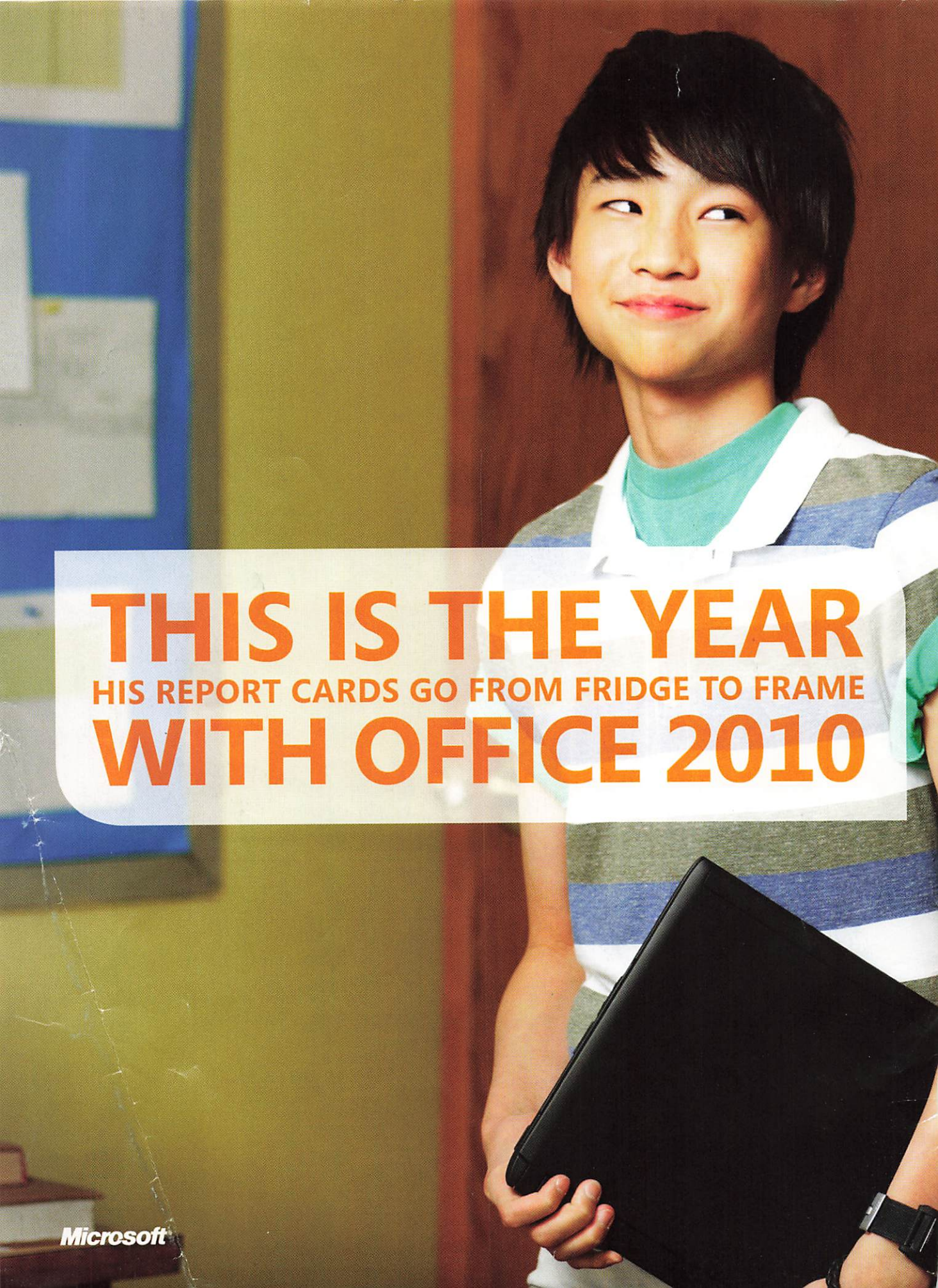
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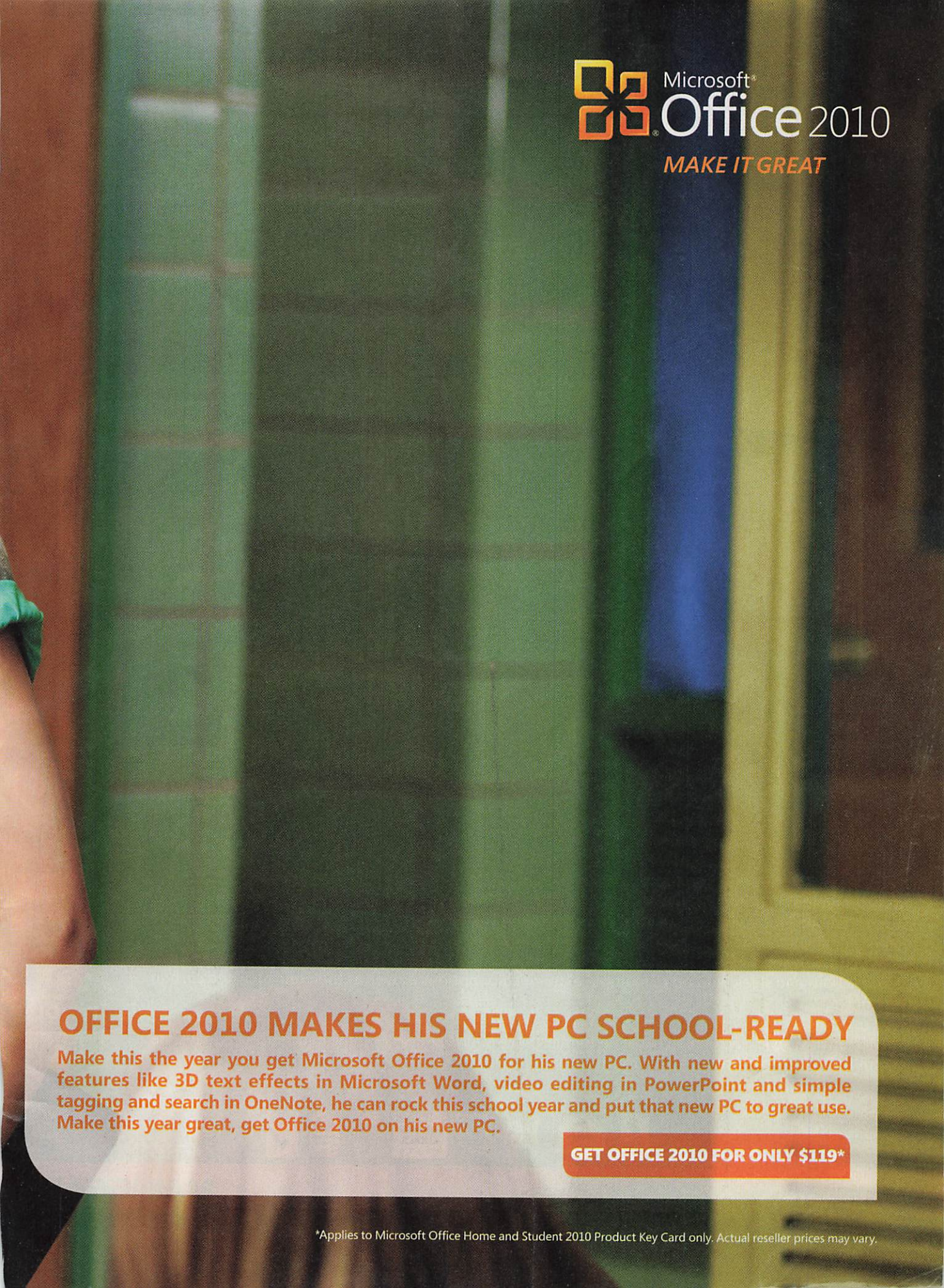
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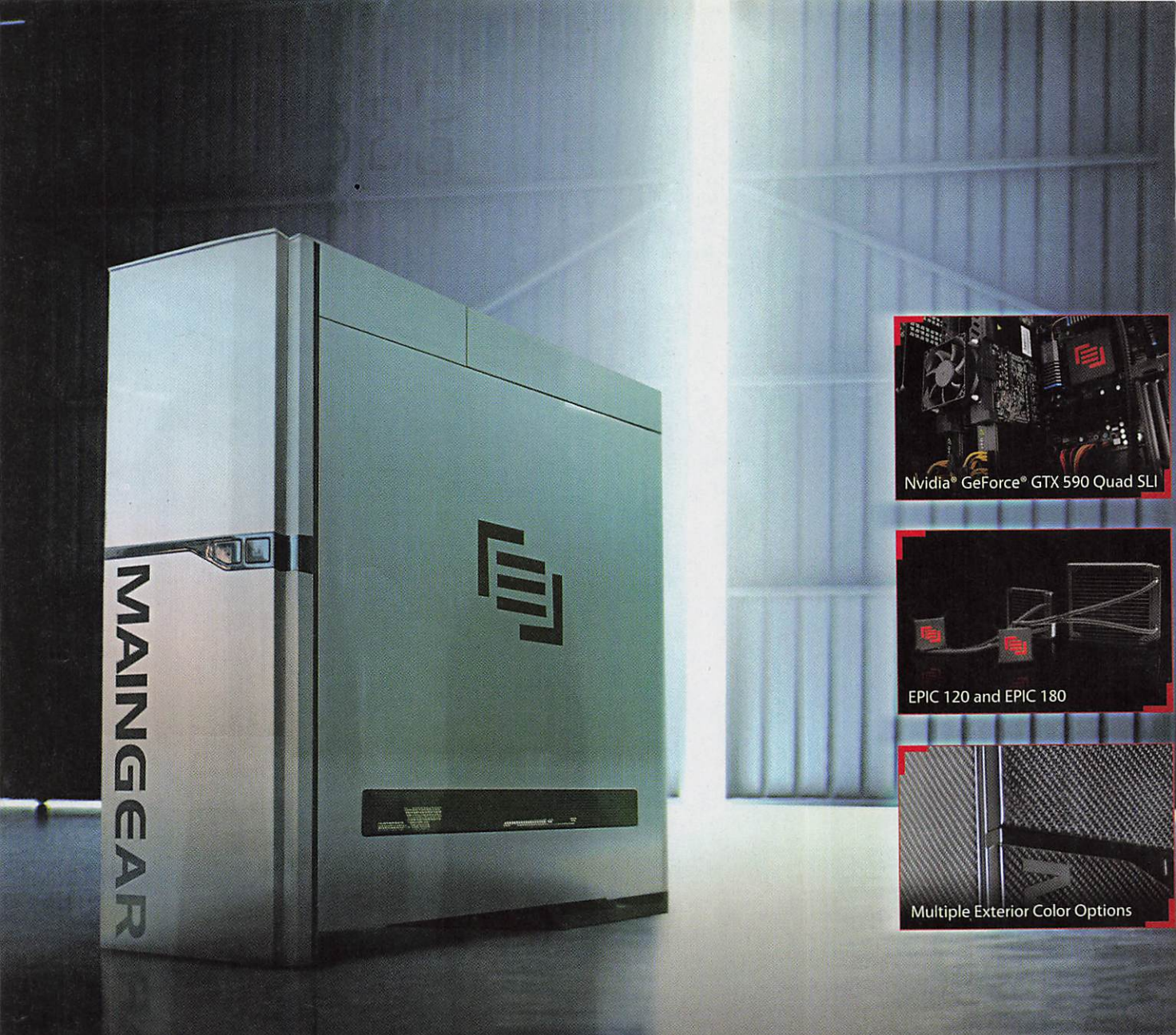

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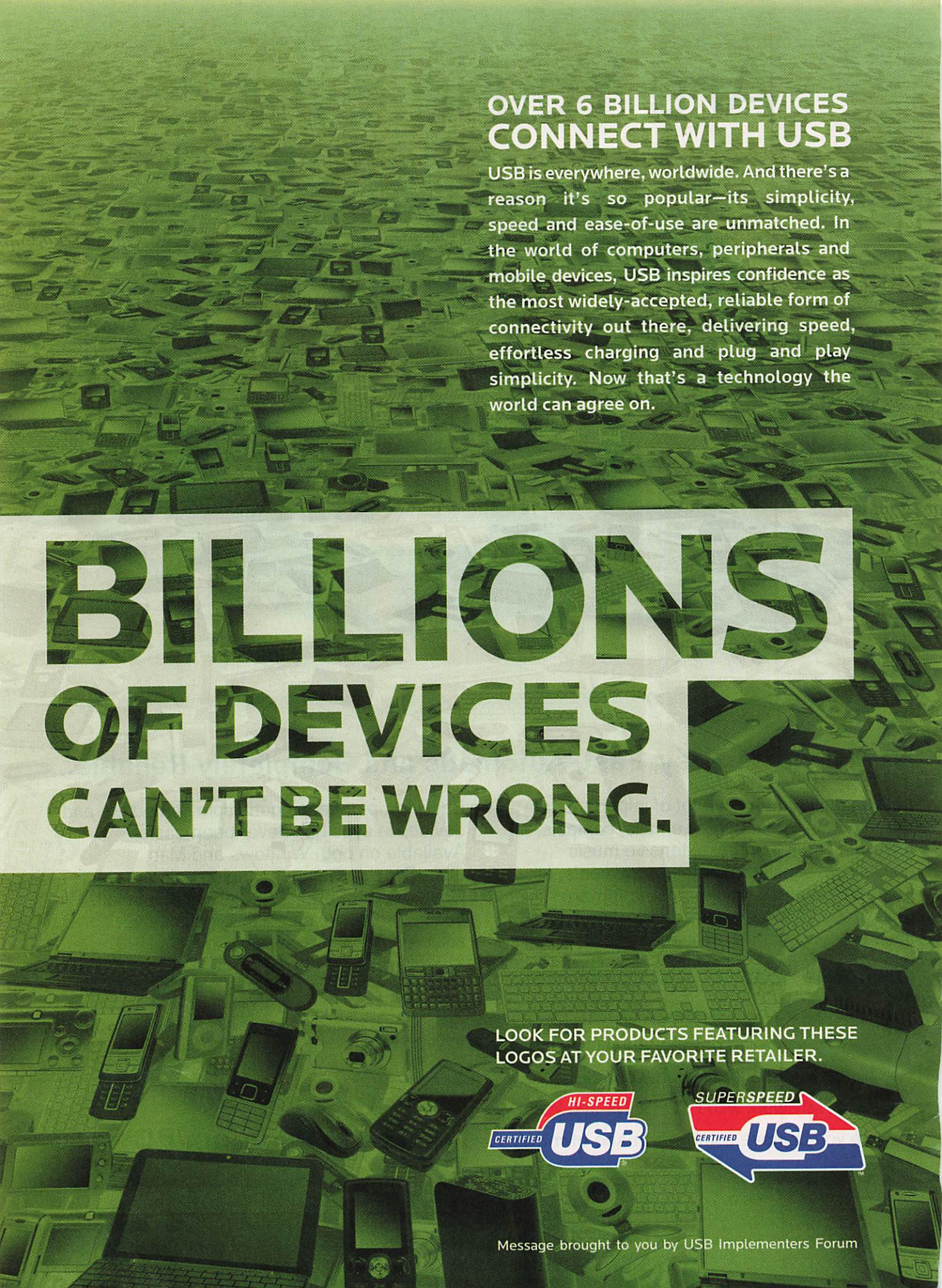
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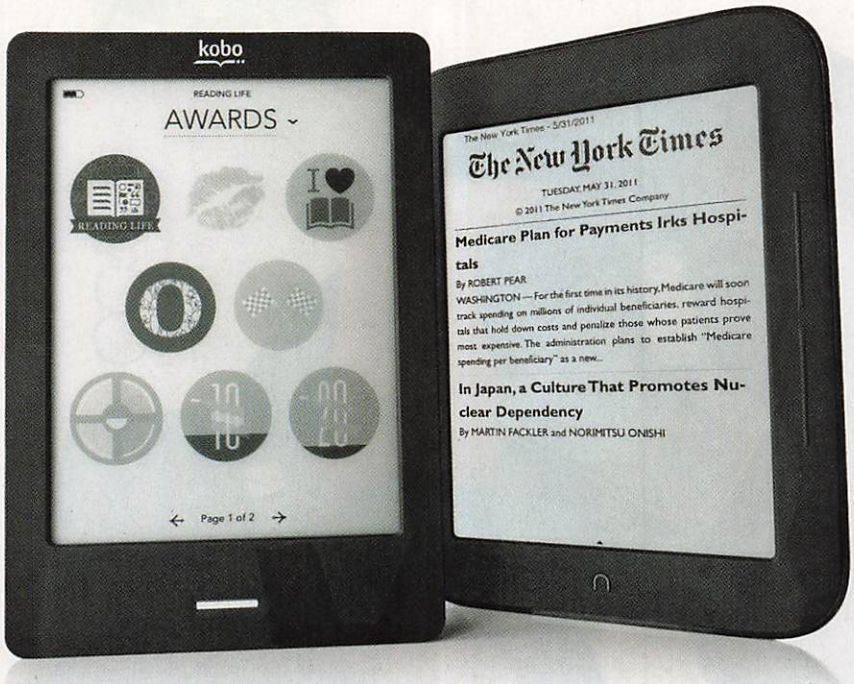
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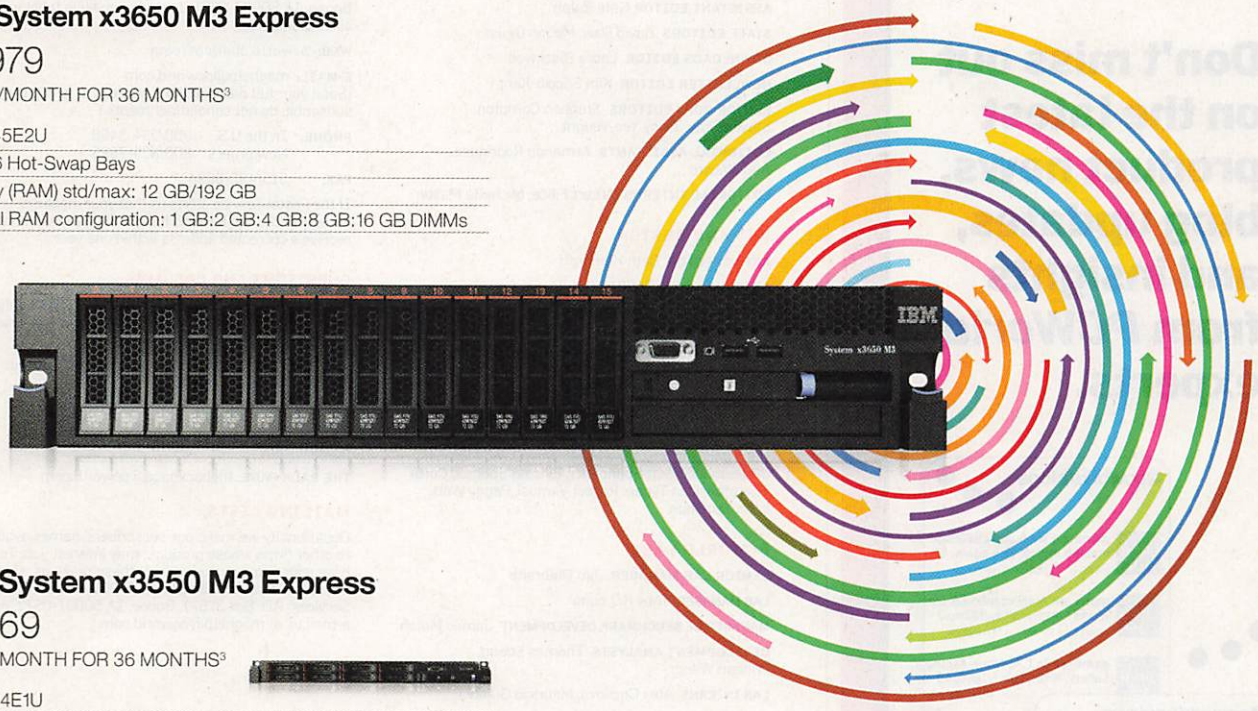

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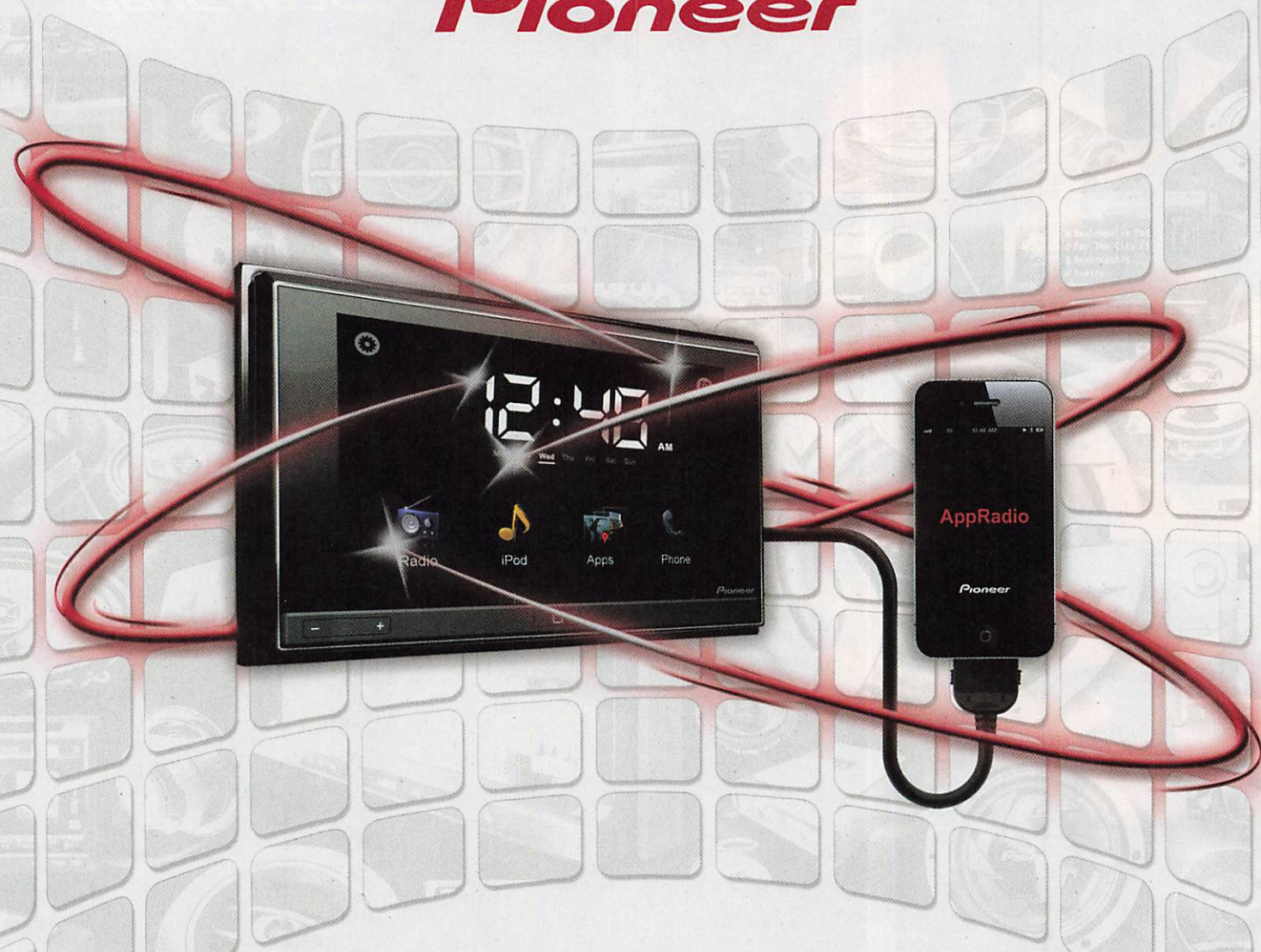

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STEVE FOX

How to Create a How-To Issue

Mix homegrown talent with a dash of outside expertise, and what do you get? A whole lot of great advice.

ALL HAIL PATRICK MILLER. The *PCWorld* associate editor—our resident how-to guru—was point man, designated scapegoat, and organizational genius behind this issue. You can get a sense of what those efforts entailed by viewing the step-by-step outline at right.

Then again, Miller's job was easier than it might have been because he is a practitioner of Brazilian Jiu-Jitsu. What editor would dare blow a deadline when the consequences could include the dreaded sleeper hold?

Of course, Miller didn't act alone; every editor on the masthead lent a hand, as did an eclectic mix of experts. For tips on how to beat Minesweeper (page 71), we tapped world record holder Kamil Murański. Anil Polat, author of the ebook "The Ultimate Tech Guide for Travelers," offered travel advice (page 76). Hannah Hart, who created the popular (and tipsy) cooking show "My Drunken Kitchen," told us how to become a YouTube sensation (page 94).

Pro gamer Geoff "iNcontroL" Robinson explained how to win at StarCraft II (page 70). Cartoonist Dorothy Gambrell, of "Cat and Girl" fame, weighed in on online cartooning (page 83). And Twitter luminary Harry McCracken, former editor in chief of *PCWorld*, showed how to tweet like a superstar (page 93).

And fear not: No sleeper holds were employed in the making of this issue.

Steve Fox is editorial director of PCWorld.

SPECIAL ISSUE

1. Hold an extended staffwide meeting. Supply snacks. Brainstorm 150-plus story ideas.
2. Assign someone to act as overall issue editor/project manager. That person will be in editorial hell for the next 45 days.
3. Prune the giant list of story possibilities to about 100.
4. Enter the remaining article ideas into a shared document. Let it simmer, as editors refine and revise the various options.
5. Devise an organizing theme or principle for the issue (in this case, Use, Make, Fix, Ditch, and so on).
6. Divvy up sections among specific editors. Horse-trading ensues.

meanwhile...

- Art Director creates initial layouts, assigns art elements to illustrators and photographers.
- Editors begin story-by-story negotiation with Art for revised word counts.

7. Editors approach subject experts (often one another) about writing articles.
8. Editors assign articles, give deadlines to writers.

meanwhile...

- Brainstorm magazine cover concepts.
- Art Department creates ten original covers.
- Revise endlessly until approved.
- Again promise self to revisit arbitrariness and inefficiency of cover process "when there's time."

9. Editors harangue writers about missed deadlines. Panic as appropriate.
10. Test, edit, lay out, and copyedit submitted how-to articles.
11. Revise layouts as needed.
12. Editors grovel before Art Department, seeking more space for articles.
13. Magical elves tweak the text to fit the space and create a seamless flow.
14. Multiple pairs of eyes count and recount the how-to articles to come up with the correct number to put on the cover ("66 Spectacular Tips...").
15. Proofread pages; finalize the cover and all content, and ship it to the printer.
16. Editors, designers, and elves rejoice.
17. Start on next month's issue.

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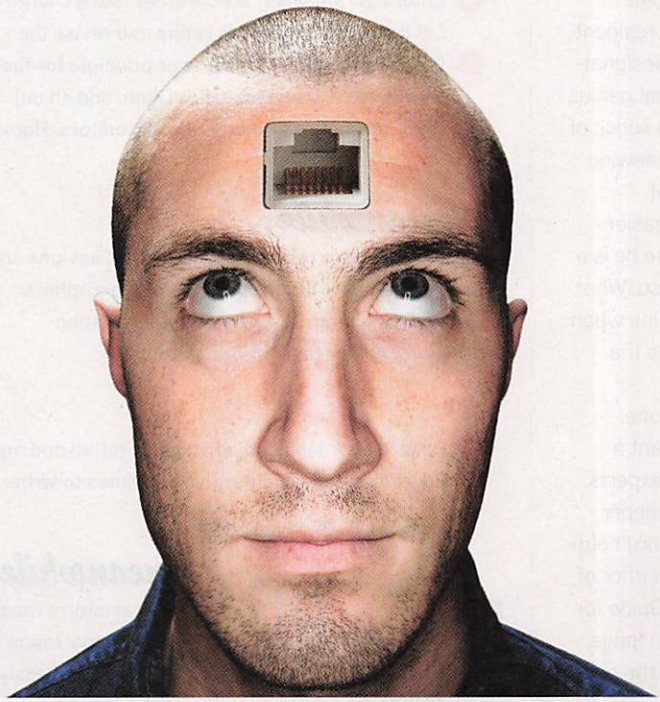

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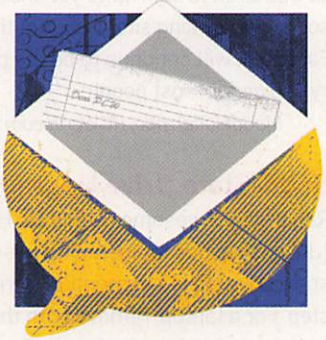
PCW Forum

Our skeptical look in July's *Forward* at the issue of smartphones tracking their users provoked passionate comments from readers concerned about threats to privacy. Are such fears unwarranted? Or was *1984* just a few decades early? Add your two cents at find.pcworld.com/71967.



Phone-Spying Threat Is Real

Regarding July's "Smartphone Spying Reality Check" (*Forward*): I think that authors Ian Paul and Brent Rose are the ones needing a reality check. How long do they think it will take for the first subpoena for detailed tracking data to be requested by some lawyer—30 days, 60 days, 90 days? If any law protects this detailed location data from being requested, they do not mention it.

I have never read a detailed description of how a cell phone network operates, but it is obvious that any "on" phone must report to the nearest cell tower frequently so that the phone may be called. And I suppose the smarter ones with GPS will report latitude and longitude, since operators want to use the phones' positions to send local ads.

Does anyone really want somebody to know exactly where they are *all* the time? I certainly don't. The whole subject strikes at the base of personal privacy. Was *1984* just 27 years too soon?

R.D. Kenitzer, Port Angeles, Washington

Calling privacy concerns "hoopla" (as the online version of the story puts it) trivializes them. Companies are determined to mine every drop of information that they can feasibly (never mind legally) get away with. It's an advertiser's and marketer's dream to know their targets as intimately as possible. Unfortunately, that's totally incompatible with respecting privacy.

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> Anyone who believes that privacy exists today and fails to act accordingly is a fool and deserves exactly what they get.
>
> *TheOldTopkick, PCWorld.com forums*

My concern is that [smartphone] information can be sold to anybody with enough money. Yes, it is possible to track specific users via the UID of their phone, so it is possible to have "a giant map in a secret room, where all of your movements can be followed."

Add all the credit card logs, email records, browsing logs, and other data that companies like Apple collect without their users' consent, and say, "Welcome to the world of no privacy...."

Programit, PCWorld.com forums

One Data Breach to Come

July's *Techlog* discusses computer security. Here in Canada, some people want to put our medical files into a database. Thus, if one must see a new doctor or is admitted to a hospital, the staff will be able to call up the patient's complete history. So far, so good.

However, it is only a matter of time before hackers break into such a database; and if they should access the medical files of every man, woman, and child in Canada, God alone knows what they could do with the information.

Gordon Ball, Ottawa Canada

Cloud Computing

Cloud computing is not new ["Get the Most Out of the Cloud," July]. In 1986, I received an IBM-compatible computer at work, but I could not use files created by my Apple IIe home computer. However, I found that I could prepare ASCII letters and reports at home, email them by modem to my mailbox via Startext, a service of the *Fort Worth Star-Telegram*, and retrieve them at work. I was on cloud nine when I learned how to do that.

Art Rubeck, Irving, Texas

Google+: Is It Needed?

Regarding your online story "Google+ Social Network: Hands-On First Impressions" [find.pcworld.com/71968]: »

ILLUSTRATION: GARY NEILL

I'm looking forward to it [Google+], having just deactivated my Facebook account. I have not looked back. I don't miss my Facebook account at all—there were just too many little things that annoyed me about the platform that I think Google will be able to solve easily.

MickieN5ixl, PCWorld.com forums

Although I love Google, I simply can't be bothered to sign up to yet another social networking site. I predict that Facebook will continue to be the primary choice for most people.

MariaMullerrn6a, PCWorld.com forums

Solid-State Drive Upgrade

Regarding "Awesome Hardware Hacks" [July]: Your tips for installing [a solid-state drive] failed to mention a critical step. For a laptop, remove both the AC power cord and the battery before installing the drive. (For a desktop, I found that you should disconnect the power cord from the back of the power supply and discharge any remaining electricity from the motherboard by pressing the power button.) Also, with an SSD installed, having your laptop plugged into a line conditioner or surge protector may be prudent. SSDs are sensitive to voltage spikes and surges.

Finally, will the new drive require a firmware update? If it does, follow the manufacturer's recommendations (such an update may involve using some extra equipment as well).

Richard Kindall, Hutchinson, Kansas

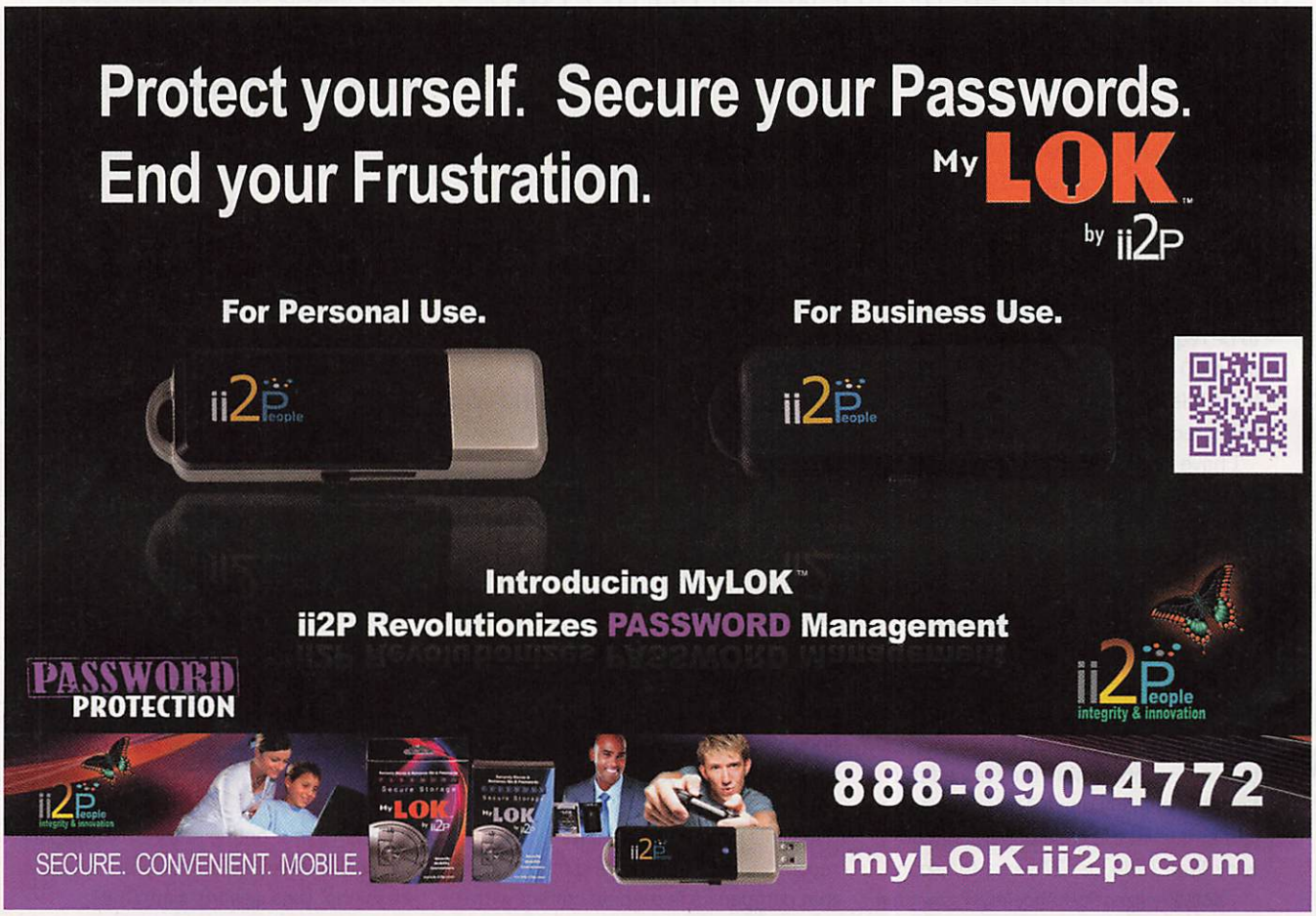
PCWorld welcomes your feedback. We reserve the right to edit for length and clarity. Share your thoughts in the Comments area under each story on our website, or visit our forums (find.pcworld.com/55165). Send email to letters@pcworld.com.

CORRECTIONS

IN AUGUST'S "ESSENTIAL Apps for Every Smartphone," we should have noted that the Pandora app is available for Windows Mobile 6, not Windows Phone 7.

In "High-Noon Tablet Showdown" (*Reviews and Rankings*, August), the text should have said that the Samsung Galaxy Tab 10.1 weighs 0.08 ounce less than the iPad 2 (the weights are correct).

***PCWorld* regrets the errors.**



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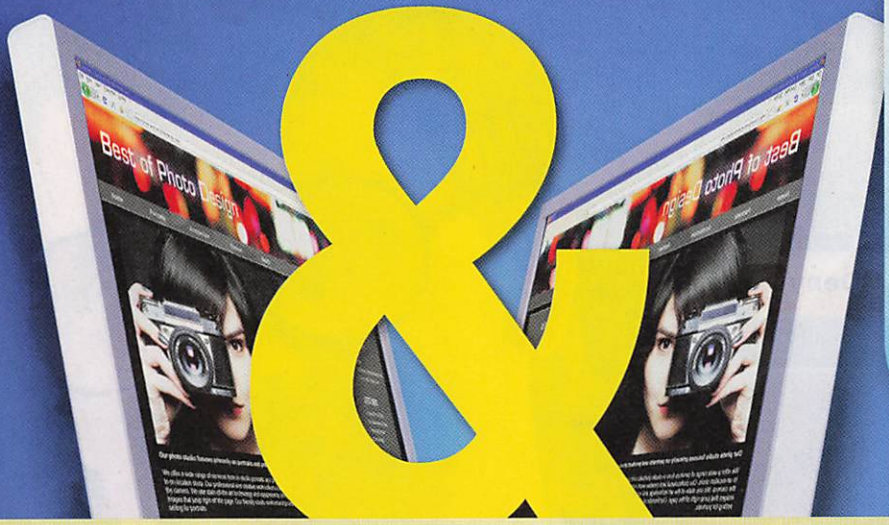

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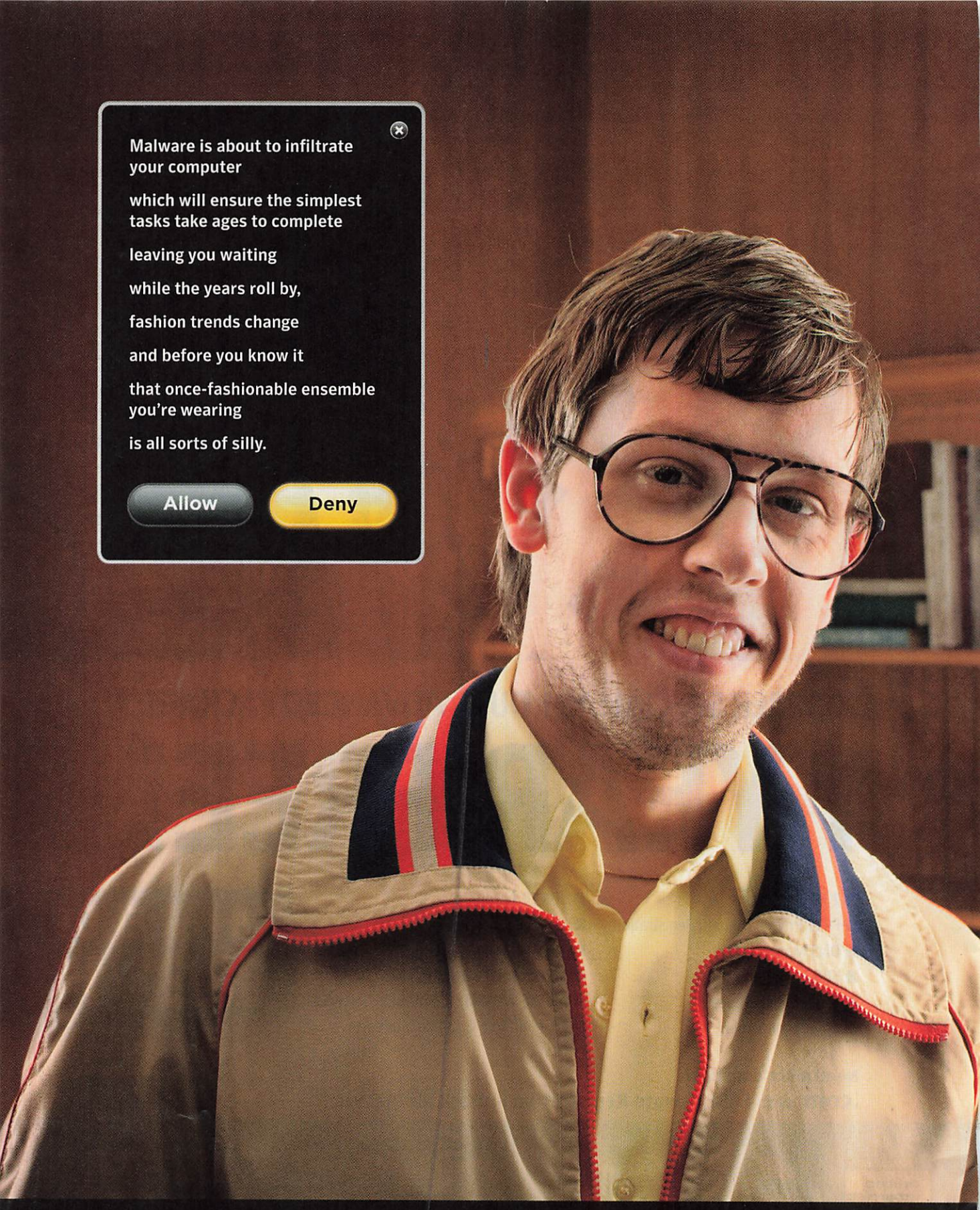
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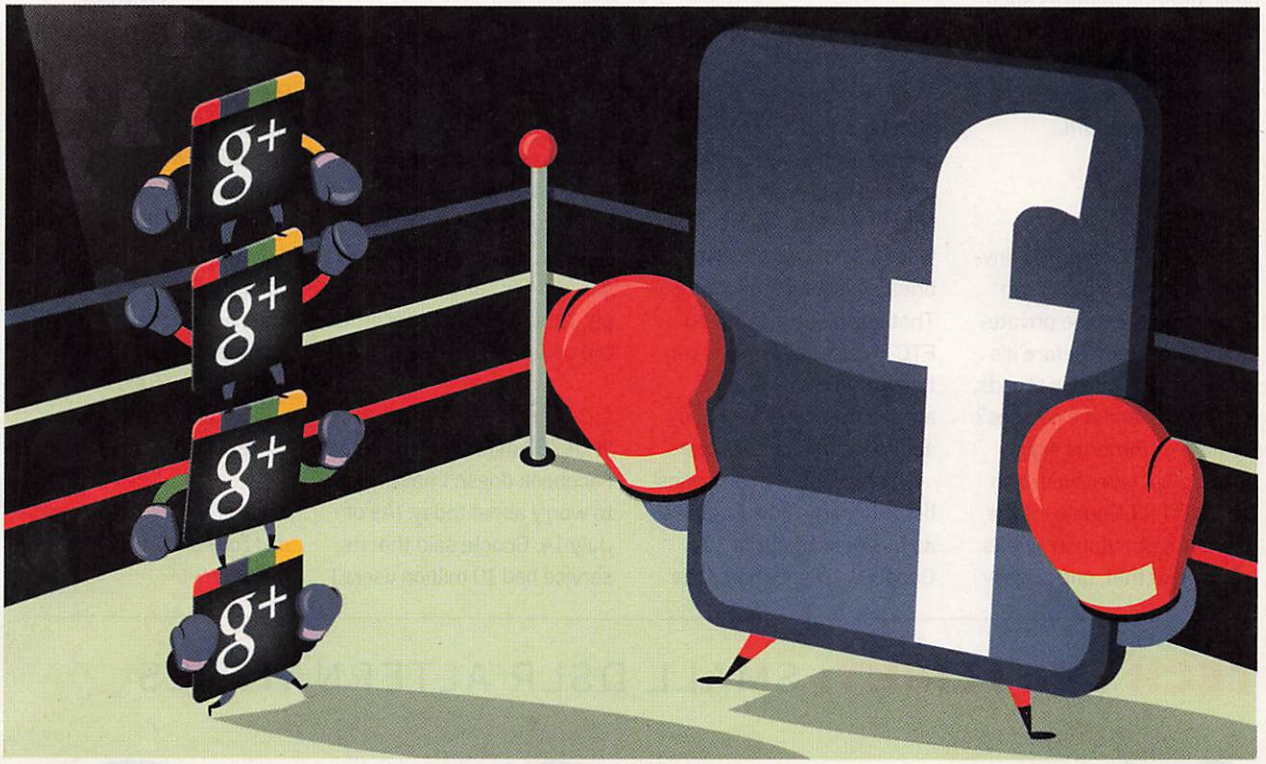
Forward



Google+: Facebook Gains a Rival

BY JARED NEWMAN

Can the search giant succeed with its social network? We look at what's different about Google+, and why you might want to try it.

GOOGLE MAY HAVE finally figured out social networking. Demand for Google+ invites was through the roof when the service launched in late June, and early users are praising it as a fresh alternative to Facebook.

Can Google+ help users share information in a way that Facebook does not? It's far too early to tell. Google says that its service is being "field tested"—and you can bet Google+ will look different six months from now.

Networking via Circles

The manner in which you add friends to Google+ sets it apart: The service culls a list of friends from your Gmail account, and you drag and drop them into "Circles." You can create Circles for different parts of your life, such as for work, college friends, or a carpool. You update your Google+ Stream (the counterpart to Facebook's News Feed), but unlike on Facebook you can share posts with specific Circles. That way your coworkers don't see the updates meant for your softball team, and vice versa.

Google+ doesn't require Friend Requests. You can follow anyone, profiles are all public, and anything you choose to share publicly can be viewed by anyone on the Web, Google+ member or not. Think of Google+ as a mix between Twitter and blogging tool Tumblr.

Among other nifty features, Google+ has Hangout, which lets up to ten people chat via webcam simultaneously. »

ILLUSTRATION: JOHN UELAND

ON GOOGLE+ pages, the Stream is the center of activity, just as the News Feed is on Facebook.

(Facebook is meeting that challenge, announcing a partnership with Skype for one-on-one video calls.) But for the most part Google+ borrows heavily from Facebook, offering features such as photo tagging, posting on friends' walls, and the ability to post a video to your Stream with one simple URL.

Will the Circle Stay Unbroken?

The future of Google+ is anyone's guess. How long can Google maintain the private-club atmosphere before it's pressured to invite big brands, advertisers, and the masses? Gaming, commerce, and dancing-cat videos can't be too far off for Google+ if the network's population swells.

On top of that, one privacy misstep or product-quality blunder could doom the project. Google is trying to avoid privacy problems in light of the Buzz debacle, when users' contacts were briefly exposed to the public. That episode triggered an FTC investigation and a settlement in which Google agreed to submit to privacy audits for the next 20 years.

The biggest item on critics' lists concerns how Google's ad business might fit into Google+. "If you marry the strength of the search that Google has with the behavioral base of social media that Facebook has, that's a one-two punch," says Judy Shapiro, an AdAge.com blogger and CEO of EngageSimply. "But our privacy becomes the collateral damage."

Google+ vs. Facebook

With 750 million members, Facebook doesn't have much to worry about today. (As of July 14, Google said that its service had 10 million users.) But instead of wondering whether Google+ can beat Facebook, we ought to ask whether they can coexist.

The idea that they can offer different kinds of social media and get along peacefully isn't crazy. People have made Flikr albums, Twitter profiles, AIM handles, YouTube channels, and Tumblr pages. Surely there's room for one more?

Megan Geuss, Mark Sullivan, and Ian Paul also contributed to this article.

TECH SPOTLIGHT: SMALL DSLR ALTERNATIVES

PENTAX Q Both small (1.2 inches deep) and light (6.3 ounces), the Q also has a flash that works popped up or down. It has physical controls for almost everything, too. But it holds a smaller sensor than anything else in the interchangeable-lens class—its sensor is the size of those in many point-and-shoots. Due this fall, it will cost about $800 in a kit with a 47mm/F1.9 prime lens.

OLYMPUS PEN LITE E-PL3 New to the Pen line of mirrorless interchangeable-lens cameras, the 1.46-inch-deep E-PL3 (price and date to be announced) will have the same fast focusing, 1080i video capture, and 3D shooting as its higher-end sibling, the Pen E-P3. It adds a tilting LCD and a fast burst mode, too. A hot-shoe-mounted flash comes with the camera.

SONY ALPHA NEX-C3 At just 1.29 inches deep, the 7.9-ounce Alpha NEX-C3 (due in August, $650 with an 18-55mm lens) offers an APS-C size sensor. This second-generation NEX camera replaces the lower-end Alpha NEX-3 while adding new filter effects, higher-resolution images, photo-retouching options, and improved battery life. But it doesn't have a built-in flash.

PANASONIC LUMIX DMC-GF3 A tiny interchangeable-lens camera with a pop-up flash, the GF3 ($700 with a 14mm prime lens, or $600 with a 14-42mm zoom lens) is 1.28 inches deep and 7.83 ounces. Trading a mode dial for touchscreen- and thumbwheel-navigated menus, it has the same touch-to-focus controls and quick autofocus as its predecessors, but lacks a hot shoe.

PHOTOGRAPHS: ROBERT CARDIN (PENTAX, OLYMPUS, SONY)

Copyright Crackdown Raises Red Flags

IN EARLY JULY, five major Internet service providers announced that they would start to combat, educate, and punish people sharing copyrighted files online.

The ISPs, including Comcast and Verizon, have agreed to work with the movie and music industries to protect copyright owners. They say they will identify suspected violators and warn them via email or bring their Internet connection to a crawl.

Critics of the "Copyright Alert System" charge that the policies trample user rights. At sites catering to people who share, swap, and download digital content, users are suggesting possible workarounds—such as employing a proxy or VPN—to avoid copyright alerts.

David Sohn, senior policy counsel for the Center for Democracy & Technology, says that it is wrong to hamper a customer's Net connection "based on allegations that have not been tested in court." He also says that making sure alerts are sent to the subscriber will be difficult, and he isn't certain how effective the appeal process will be for accused infringers.

Limited Defense

Abigail Phillips, senior staff attorney for the Electronic Frontier Foundation, notes that the policy says failure to secure a Wi-Fi router can be used as a defense only once in the appeal process. She says that will have serious consequences for small businesses that allow customers to access Wi-Fi.

Speaking to E-Commerce Times, Hillel Parness, partner with trial firm Robins, Kaplan, Miller & Ciresi, said that he thinks the ISPs may be getting involved in order to remove peer-to-peer strain on their networks.

—Paul Suarez

THE CENTER FOR Democracy and Technology is among several critics of an ISP plan to fight against alleged copyright violations.

BRIEFS

HP Wi-Fi Mobile Mouse Eliminates Hassles

The $50 HP Wi-Fi Mobile Mouse connects quickly to a laptop's Wi-Fi receiver—and unlike Bluetooth mice, it doesn't require you to constantly pair it again with your notebook. HP says it boasts up to nine months of battery life, has a range of up to 30 feet, and doesn't need a USB dongle. Apparently it doesn't interfere with Wi-Fi networking, so no worries about having to choose between your mouse and your Net connection.

Sony Previews S1 and S2 Android Tablets

In mid-July, Sony revealed its S1 and S2 Android Honeycomb tablets. No word on prices or release dates just yet. The traditional S1 will be Wi-Fi only, with a 9.4-inch screen. The clamshell S2, with two 5.5-inch-wide screens, should be easy to stow in a coat pocket. AT&T will provide HSPA+ data for the S2. Both tablets are PlayStation certified, and feature dual-core Nvidia Tegra 2 processors.

ICANN Okays New Top-Level Domains

The nonprofit Internet Corporation for Assigned Names and Numbers has opened an application window for new domain suffixes, which could be almost any word in any language. Applications must come with a $185,000 fee to cover the cost of a review that determines whether an applicant has a legitimate claim to a suffix. Companies and organizations such as Canon and UNICEF say they'll apply, and coalitions are forming to apply for ".eco" and other generic terms.

Hulu Plus App Available on Select Android Phones

The Hulu Plus app ($8 per month, U.S. only) is now in the Android Market. It works on the Nexus One, Nexus S, HTC Inspire 4G, Motorola Droid 2, Motorola Droid X, and Motorola Atrix. Support for more devices should be announced later. The mobile selection is around half of what Hulu offers on the Web; if you want to see whether Hulu has shows you like, you can try it for one week free.

Lytro Debuts 'Light Field' Cameras

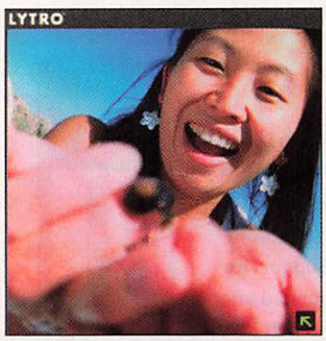
LYTRO, A STARTUP in Silicon Valley, is bringing "light field" cameras to the market this year. This type of photography captures the color, intensity, and direction of individual light rays, allowing the user to refocus the picture even after taking it.

Interactive photos at find.pcworld.com/71965 demonstrate the concept; clicking anywhere on each picture changes the point of focus. Lytro also claims that its cameras work in low lighting without flash, and can take 3D photos with a single lens.

"Our mission is to change photography forever, making conventional cameras a thing of the past," Ran Ng, Lytro's founder and chief executive, wrote in a blog post.

If Lytro's first cameras really are effective, they may pose a threat to high-end digital cameras and DSLRs. But that will depend largely on pricing and portability.

—Jared Newman



WITH LYTRO TECH, you can refocus a photo after taking it.

GEEKTECH

Inside a Do-It-Yourself Smart House

What is it like to build—and use—a DIY home-automation system? We look at one smart home to find out.

YOU CAN FIND numerous companies that offer to automate your home for a (sometimes significant) fee. But such "smart home" technology doesn't have to cost thousands of dollars to install: Armed with the appropriate equipment and a little know-how, you too can assemble your very own home-automation system.

Sam Cox, a graduate-school digital-imaging student in the United Kingdom, began automating his home from scratch a year ago. Initially he did it to increase its security, but since then he has added more features to his system for both convenience and energy savings.

At present, Cox's home-automation system can perform a multitude of tasks. His custom-built security-alarm system, for instance, runs a set of IP webcams installed throughout the house. The alarm can project audible warnings to the intruder, as well as record footage and email a still image.

Cox also constructed a system that wakes him up, gives him weather information for the day ahead, and alerts him about incoming email messages. In addition, his system allows him to stream music into any room, turn on appliances, and dim lights.

DO-IT-YOURSELFER SAM COX has automated his home for cost savings and convenience, as well as security purposes.

An old Mac Mini serves as a command center for Cox's setup. The Mac Mini controls all of the home-automation systems, and Cox can access the machine from anywhere in his house by using his iPhone and Touchatag (www.touchatag.com), an off-the-shelf Web-based RFID system.

Although automating his house has cost Cox around $1200 so far, the end result has been worth the time and money, he says. In Cox's case, his house won't let him forget to reply to an email message or a calendar event, or allow him to burn his dinner. He also has the invaluable peace of mind that comes from running a comprehensive security system.

Of course, his home-automation system has a few shortcomings. For one thing, the Mac Mini can be quite slow because of its age. And the IP webcams may be too sensitive at times, so that even a change in natural light can trigger a false alarm.

Want to build your own system? Cox has this advice: "Start with some personal goals to make your life easier, and start experimenting. If you want to get more advanced, buy an Arduino [board], and follow tutorials online. Try to hack a simple program that listens out for a signal and relays codes to the Arduino to do something. This will help you understand basic computer programming and give you a solid platform to progress.

"Just mess around and have fun." ●

—Elizabeth Fish

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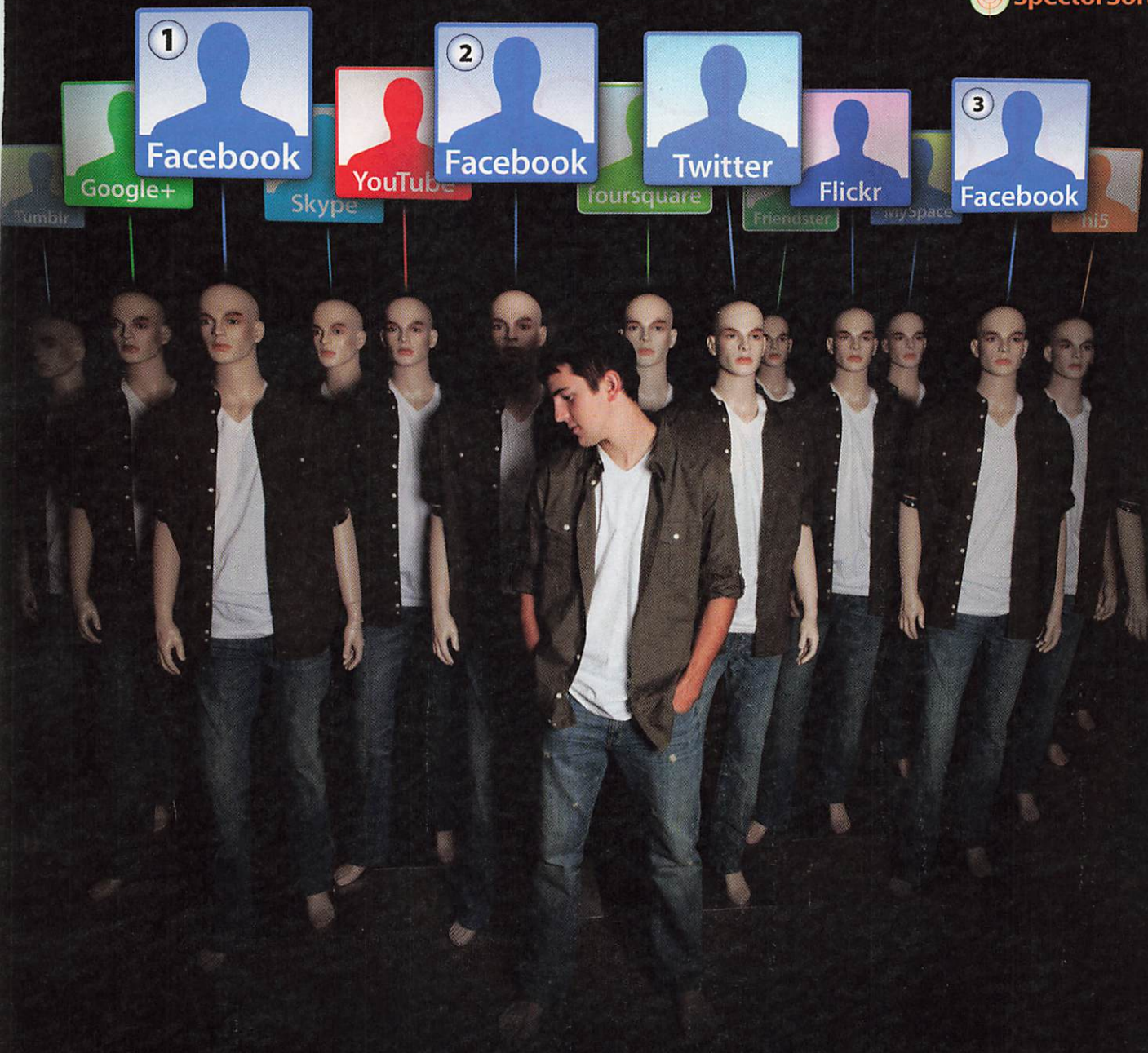

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Staff Picks

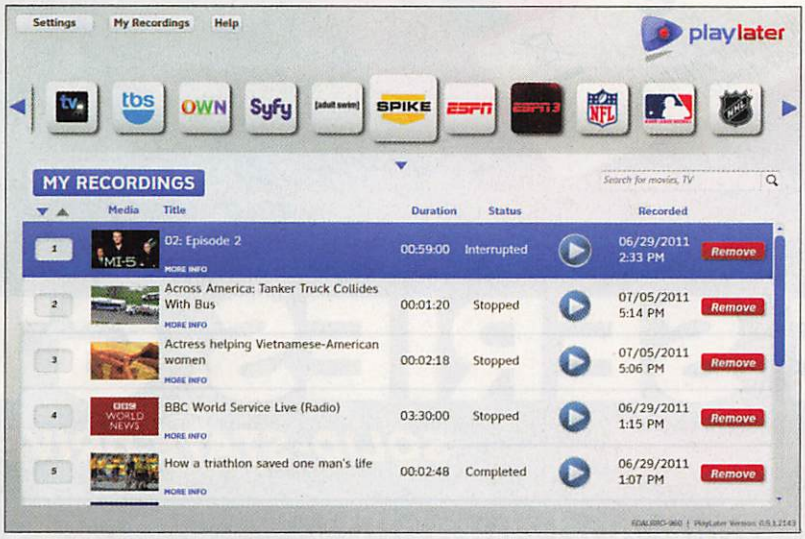
NEW PRODUCTS THAT HAVE OUR EDITORS DROOLING

Lenovo ThinkPad Tablet

Most tablets so far have been media-consumption machines. Lenovo says its ThinkPad Tablet ($499) will be designed to get work done. It will take input from a pen or a USB-connected keyboard, and it will come preloaded with software to get you on your company's VPN. find.pcworld.com/72000

Pano

Panoramic photos are a terrific way to capture the overall feel of a place, but they can be devilishly hard to make, even with a "real" camera. Pano, a $2 iOS app soon to appear on Android as well, simplifies the task of creating 360-degree images with your smartphone's camera. debaclesoftware.com



PlayLater

Streaming video is great—except when it starts pausing and sputtering because you're stuck with a lousy Internet connection. With PlayLater, a $5-per-month subscription service and download, you can pull video off the Web and save it on your hard drive to view whenever you wish. playlater.tv

Sony VAIO Z Series

Another month, another MacBook Air rival. Not only is Sony's VAIO Z (about $2000) a hair lighter and thinner than Apple's portable, but it's also armed with better specs. Add a special dock, and you'll get superior graphics performance. find.pcworld.com/71989

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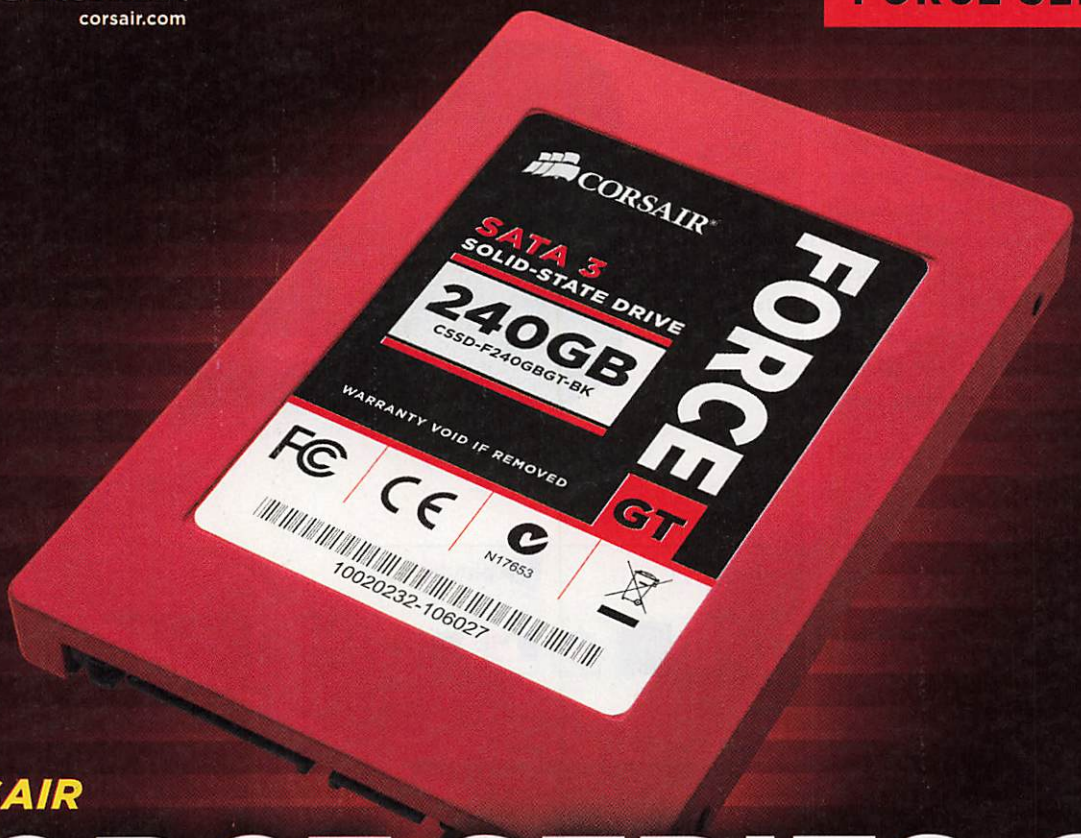

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What Your Wireless Carrier Knows

BY MARK SULLIVAN

CONSUMERS USE PHONES and tablets to access everything from work email to bank accounts, but can users be sure that the data on their devices is for their eyes only?

Without physical access to the device, reading personal data on a smartphone is very difficult. The one party that has constant access to the data running to and from your phone, however, is your wireless carrier. How much does your provider know about you? Quite a lot—but for the most part, the carrier sees the information in an aggregated form that is not associated with individual users.

Service providers can learn a lot about the devices, apps, and content you use. But they find macro-level trends far more interesting.

Hardware: Wireless carriers need to know what kinds of devices are connected to their networks so that they can provide the appropriate amount of bandwidth. For example, if the carrier knows that its users' smartphones typically have large screens, it can conclude that those devices will probably consume a large amount of streamed video.

Alcatel-Lucent, for one, makes analytical equipment for learning what devices are connecting to a specific radio, and from how far away. Operators can then gauge where to point the antennas, and how much power to supply. Andrew McDonald, Alcatel-Lucent's vice president of network and service management, stresses that operators don't use network intelligence equipment to find any one device's physical location on a map. Instead, they focus on the position of devices relative to the cell tower.

'Metadata' about data packets: Each data packet sent has a "wrapper" that includes the origin and destination, the protocol (IP), whether the packet holds data from a real-time service such as VoIP, and the amount of data. The operator uses the information to get a rough idea of the content's purpose, without discovering details about the content itself.

Besides measuring the broadband usage of subscribers with metered plans, the wrapper helps the carrier prioritize time-sensitive data, like VoIP packets, over other packets, such as MP3 downloads. Network intelligence data also lets carriers identify where bandwidth-hungry applications are heavily used. For instance, if mobile video chat becomes popular in a downtown area during business hours, the carrier »

ILLUSTRATION: GARY NEILL

SPECIAL ISSUE

HOW TO Find Terrific Deals, Fast

When it comes to bargain hunting on the Web, even email alerts are too slow these days. You can snag online deals faster by signing up for a dedicated Twitter feed such as @dealnews or @slickdeals. They post links several times each hour, giving you the inside scoop on everything from laptops to camera cases.

might increase the bandwidth available to that area during that time period.

Deep Packet Inspection: DPI software captures a few packets of data flowing to or from a device, and then quickly analyzes the details of the content. This practice allows the carrier to quantify which websites users are visiting, plus what kinds of services they're using.

DPI intelligence can help the carrier identify revenue opportunities. If, say, subscribers are spending a lot of time on Facebook, they might be willing to pay for a higher-priced data plan if the service could guarantee them unlimited use of the app every month.

On the dark side, carriers might use DPI software for "lawful interception"—that is, to capture data for law enforcement from the data streams of "persons of interest." And critics have cited DPI as a tool that operators may use to detect and then inhibit or block certain kinds of content—BitTorrent downloads, for example—a violation of the principles of network neutrality.

Targeting individual devices may not always be a bad thing, however. Carriers might map the IP address of a device to the subscriber's account if, for instance, a connected device becomes infected with a virus and begins to abuse network resources. In that case, network engineers may either suspend or limit its access until the device is fixed or the offending app is terminated.

A Wealth of Information

Clearly, wireless operators can look pretty deeply into their networks. But Alcatel-Lucent's McDonald emphasizes that carriers are far more interested in the habits of large groups of users than in those of single users. "Carriers are looking to see if something is changing in a bad way; they are looking for trends," he says. When a wireless carrier gets a general sense of what's going on under its umbrella, that means your service could become a whole lot smoother.

SKEPTICAL SHOPPER

Buy a New Car Like the Experts Do

MEGAN GEUSS

Shopping for a car, and overwhelmed? You can find a sleek new ride with the help of some handy mobile apps.

IF YOU'VE BEEN wanting to break in a brand-new car, September is a great time to go shopping. As 2012's models arrive, car dealers are starting to think about moving their 2011 models off the lot. But before you walk into a dealership and try to haggle, do your research with the aid of car-buying apps.

The respected car-information site Edmunds.com provides free apps for Android (find.pcworld.com/71975) and iOS (find.pcworld.com/71976) that help you find new autos available in your area based on your desired make and model, the vehicle type, the price range, or a particular feature. Each app will also show you the sticker price of cars offered for sale at local dealerships (though regardless you'll want to go there in person to see if you can negotiate the quote down a bit). The Edmunds apps even offer a "true cost to own" figure that illustrates what a car should cost you over a five-year period if you factor in average depreciation, taxes and fees, and fuel and maintenance costs, among other things. That calculation should help you determine the difference in value between two closely priced cars if, for instance, one model gets poorer gas mileage or has a tendency to break down.

THE EDMUNDS.COM APP offers detailed car-pricing information.

Similarly, a free iOS app called Car Factor (find.pcworld.com/71977) lists the specifications of almost every model of car currently available, and shows pictures of them too. You can calculate an approximate car lease, as well as stay up-to-date with the app's car-news feed. In addition, users of the Car Factor app can post the prices that they paid for their recently purchased autos; equipped with that real-world data, you may be able to negotiate a better deal.

Calculate Your Costs

Finally, most mobile platforms offer some sort of car-loan or car-payment calculator. (To see calculator apps for Android, go to find.pcworld.com/71978; for iOS, see find.pcworld.com/71979.) Before you visit a dealership, it's worthwhile to use such a tool to evaluate how much you can pay, after factoring in how long you're willing to make car payments. A calculator will give you a more realistic idea of how much it will cost you per month to enjoy your awesome new wheels.

PHOTOGRAPH: ROBERT CARDIN

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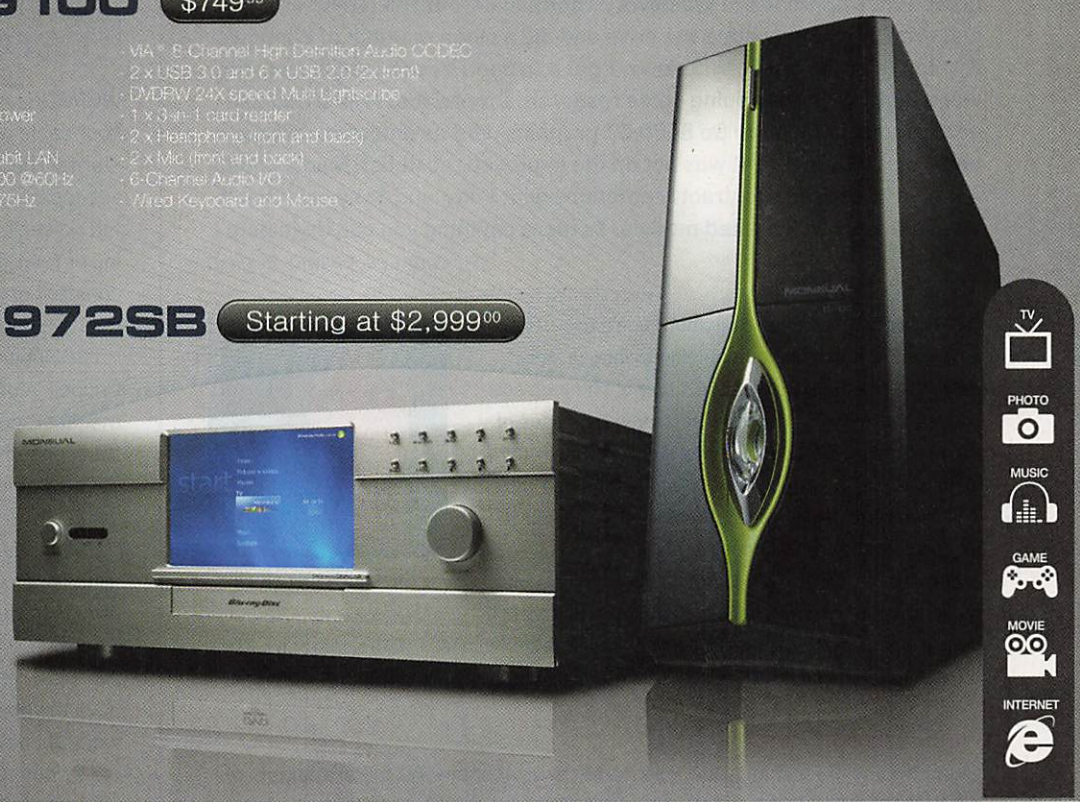

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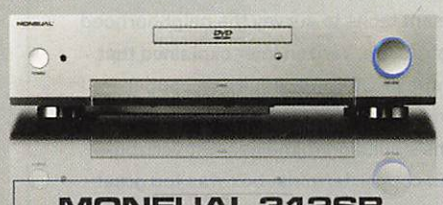
-Intel HD Graphic
-WD 1TB SATA III 7200 RPM
-LG 24X DL DVD+/-RW Drive
-Built-in 8 Channel Sound
-450W Power Supply 12cm Fan
-Windows 7 Home premium 64bit
-Onboard HDMI out
-Wireless Keyboard & Remote

Starting at $1,549.00



MONEUAL 312SB

-Intel Core i3 2120 3.3GHz
-ASUS P8P67-M EVO
-4GB Dual Channel DDR3-1333
-Intel HD Graphic
-WD 1TB SATA III 7200 RPM
-LG 24X DL DVD+/-RW Drive
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-450W Power Supply 12cm Fan
-Windows 7 Home premium 64bit
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-Wireless Keyboard & Remote

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- Kingston 4GB Dual Channel DDR3-1333
- ATI Radeon HD 5750 GDDR5 1GB HDMI
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ON YOUR SIDE

I HAVE A four-year-old 17-inch Sony VAIO laptop. Everything worked great until I upgraded to Windows 7 Ultimate 64-bit. The laptop crashed, and even after I formatted the drive and did a clean reinstall of Windows 7, it continued to crash. Whenever I got it to boot, it produced lines in any video that I ran. After doing some research, I found that Nvidia had listed my laptop's GeForce Go 8400 GT graphics card as defective, but my particular laptop model was not on the approved recall list. Nvidia could not help because of contract restrictions with Sony, and Sony said that it would repair only recalled models. Is there anything you can do to help?

—Edgar Lee, Vienna, Virginia

LEAH YAMSHON

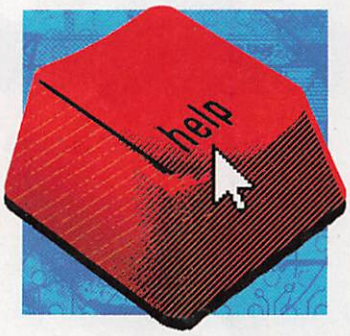
OYS responds: After hearing about Lee's case, Sony arranged for a contract technician to inspect the defective graphics card at Lee's home. The tech stated that there hadn't been enough reported cases of the problem in the 17-inch laptop to warrant a recall, even though the graphics card was indeed defective. The tech installed a new motherboard with a working graphics card, at no cost to Lee.

If you have a faulty product that you think might be included in a recall, check the recall statement; if your product isn't listed but it has the same defective part, tell the company. If the issue persists among several models, the company may recall the entire line.

High-Speed Woes

Gloria Berens of Flushing, New York, wrote to us after several failed attempts to get her apartment fixed up with DSL/ADSL Internet service from Verizon. On her last try, Verizon told Berens that other floors in her building could receive an ADSL connection, but that her floor was ineligible. It provided no further explanation.

When we inquired on her behalf, Verizon sent techs to survey the neighborhood infrastructure. Verizon later explained that high-speed Internet requires a copper-based network, and the distance from Berens's building to the nearest Verizon-owned copper terminal box was too great for the company to provide DSL/ADSL. (Berens's neighbors receive their Internet access from other providers.) Verizon eventually extended the copper infrastructure to Berens's apartment, so Verizon high-speed Internet is now available.



When you are shopping for high-speed Internet service, try sites such as MyISPFinder.org, which lists packages specific to your home address. If you want a particular service that isn't available in your neighborhood, you can request an evaluation from the provider.

›› Have you run into a problem involving customer service, a warranty, a rebate, or the like for your tech gear? E-mail us at onyourside@pcworld.com.

Your Cable Box Is an Extreme Energy Hog

WORRIED ABOUT HIGH utility bills? Your cable or satellite box may be to blame. The problem with the average set-top box is that it usually operates at full power, even when you're not watching or recording a TV show. And that constant operation translates into a massive waste of energy and money.

The National Resources Defense Council, along with Ecos, an energy-management consulting firm, estimates that consumers in the United States spend $2 billion each year to power set-top boxes that are sitting idle.

Unfortunately, virtually all set-top boxes are installed by cable and satellite TV companies such as Comcast, DirecTV, Dish Network, AT&T, and Verizon. As a result, most consumers won't have the opportunity to select a less-wasteful device unless service providers switch to more-efficient models that could automatically power down when not in use, such as during work hours or in the middle of the night.

Consumers can, however, move to more-efficient entertainment services. Rather than having one set-top box per TV, see if your television provider offers a "whole-home solution" that uses a main device, or several low-power thin-client boxes, to store video content.

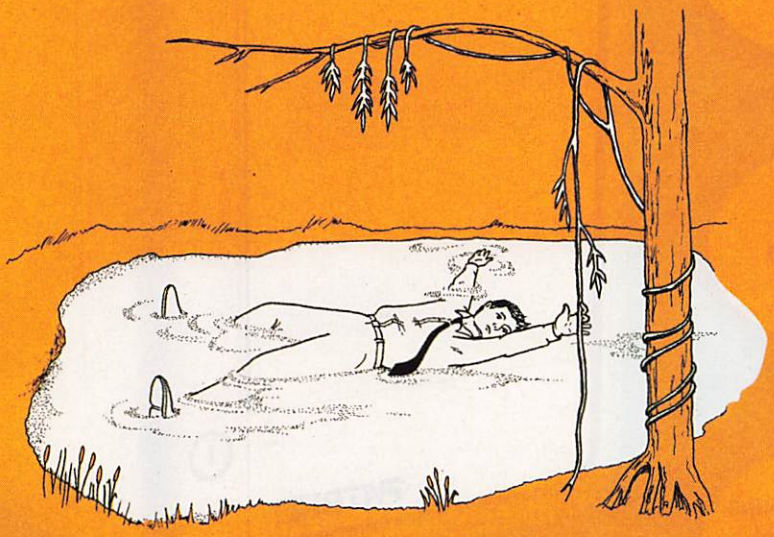
Another option is to use an energy-efficient Internet-streaming device, such as an Apple TV box, which draws a miserly 3 watts in "on" mode and only 1 watt in sleep mode. Also, more TV sets are incorporating streaming capabilities, eliminating the need for a stand-alone box like the Apple TV or a Roku device. But until you're ready to upgrade your setup, at least remember to turn off the lights when you leave the room.

—Jeff Bertolucci

ILLUSTRATION: GARY NEILL

The Worst-Case Scenario
Backup and Recovery Handbook

How to BACK UP & RECOVER YOUR APPLICATIONS While Escaping Quicksand.



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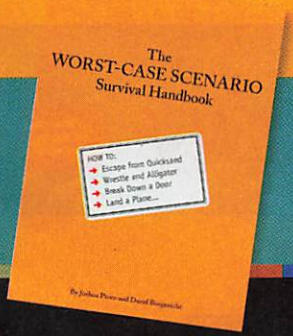

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* Savings based on comparison data of customers vs. SunGard provided backup and recovery equipment and facilities, running on a X86 server environment, 10TB of backup data.

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Create Print Materials for Your Business

HP's Marketsplash (top) and Moo Prints are two sites that offer templates for business cards.

Make a good first impression on the cheap—use these tips and resources for designing, creating, and printing essentials like business cards and brochures for your company.

BY SARAH JACOBSSON PUREWAL

PROFESSIONAL-LOOKING print materials are fundamental to making a good real-world first impression. You can design them on the cheap—or even for free—using premade templates and programs you already own. Outsourcing to an online print shop also can be extremely budget-friendly. (Get links to services mentioned at find.pcworld.com/71980.)

Business Cards

Your business card should be simple yet memorable, and have all your contact information—even social media details.

Avery, the office-products company, has hundreds of free, downloadable Microsoft Word–compatible business card templates at its website (so you can customize a template in Word).

HP has two different design sites: Creative Studio, which features downloadable, customizable templates, and Marketsplash, which provides an online tool for designing your materials. Between the two sites, HP has hundreds of attractive business card templates, all free.

Online printing company Vistaprint is known for its business cards, and offers a variety of services to suit every customer, starting at just $9 for 500 cards. Vistaprint lets you choose a premade template, build your own design on its website, or upload a custom design for printing. Vistaprint also offers free business cards, though these are limited to a choice of 45 templates and have Vistaprint branding on the back.

Another online printing company, Moo Prints, is pricier than Vistaprint (starting at about $20 for 50 cards), but it offers better quality. Moo Prints has about 230 modern-looking card designs to choose from, or you can upload your own image.

Brochures

A brochure lets you showcase your business—your products or services and your purpose. They hold more information than do business cards, so you can include additional contact details. If you have a Yelp page, say, you might consider adding a link to that page, along with your social networking »

SPECIAL ISSUE

HOW TO Save With an Energy Diet

Audit current usage; download a checklist from the Federal Energy Management Program or your utility's website. Measure gadgets' power hunger with a device such as the Kill-a-Watt. Keep windows well insulated, use fluorescent or LED light bulbs, and install occupancy sensors for lights. Use Windows 7's Power Saver settings for employees' PCs, and plug the PCs into smart strips that eliminate standby power.

handles for Facebook and Twitter.

Microsoft Word, while not ideal for desktop publishing, will do the job if you have the right template. Don't rely on Word's preloaded templates, however; Microsoft's Office website has over 80 free brochure and booklet templates for both Word and Publisher. You can grab additional free templates for brochures on HP's website for small and medium-size businesses.

Mac users can design attractive brochures in Apple's iWork Pages. While Pages features basic templates, other free templates are on the iWork Templates Blog and on iWork Community.

Looking for a desktop publishing program? Try PagePlus Starter Edition, which is free and provides master pages, column flow, and the ability to move and lock text boxes and images.

MyCreativeShop is an online brochure-maker with hundreds of customizable brochure designs, including both two-panel and three-panel designs, as well as 4-, 8-, and 12-page booklet templates. A template costs $69, but you can try one out for free before buying.

HP's Marketsplash also offers brochure designs—over 250—that you can customize with HP's online tool. Epson's CreativeZone has free downloadable trifold brochure templates, as does Brother's CreativeCenter.

If you decide to print brochures yourself, use a printer that supports two-sided (duplex) printing, such as the HP Officejet 6000 Wireless (brochures are always two-sided). But if you're printing over a hundred copies, consider outsourcing to a local print shop—many shops will include folding or assembly.

You can also outsource brochure printing to an online print shop such as Vistaprint. Its printing service starts at $290 for 500 brochures, a price that includes full color on both sides. That kind of pricing is much less expensive than what you'll find at well-known print-shop chains such as FedEx Kinko.

SIMPLY BUSINESS

Control Your PC From Your Tablet

ROBERT STROHMEYER

When you're on the road, work on your home PC via a remote-control utility.

TABLETS STILL HAVE a ways to go before they can replace a desktop PC. But your tablet can control your PC from anywhere, given a stable Net connection. We rounded up some of the leading apps to see which deliver the best blend of control, performance, and convenience. We tested on both an iPad and an Android tablet (the Acer Iconia A500). For links and more info, go to find.pcworld.com/71933 and find.pcworld.com/71934.

Best for an Android Tablet

LogMeIn Ignition (Android, iPad): This $30 app has the clearest interface among those we tested, but it is also the priciest Android app in this group.

PhoneMyPC (Android only): Currently in beta, this $15 app allows you to control systems running Windows XP or later. A cool feature is Webcam Preview (it lets you look through your computer's webcam). However, PhoneMyPC was sluggish over a remote connection.

LOGMEIN IGNITION OFFERS remote control of Windows PCs and Macs by way of an iPad or an Android tablet.

Wyse PocketCloud Pro (Android, iPad): Designed specifically for business use, this $15 app is easily the most robust tool of the three I tried. Wyse PocketCloud Pro performs well over mobile connections, supports multiple connections, and features business-grade TLS (transport layer security) encryption. A limited free version is also available.

Best for an iPad

Citrix GoToMyPC (Android and iPad): Basic one-PC service starts at $99 per year. The app supports multitouch gestures and has useful security measures, plus a reputation for business-grade reliability—but it's expensive.

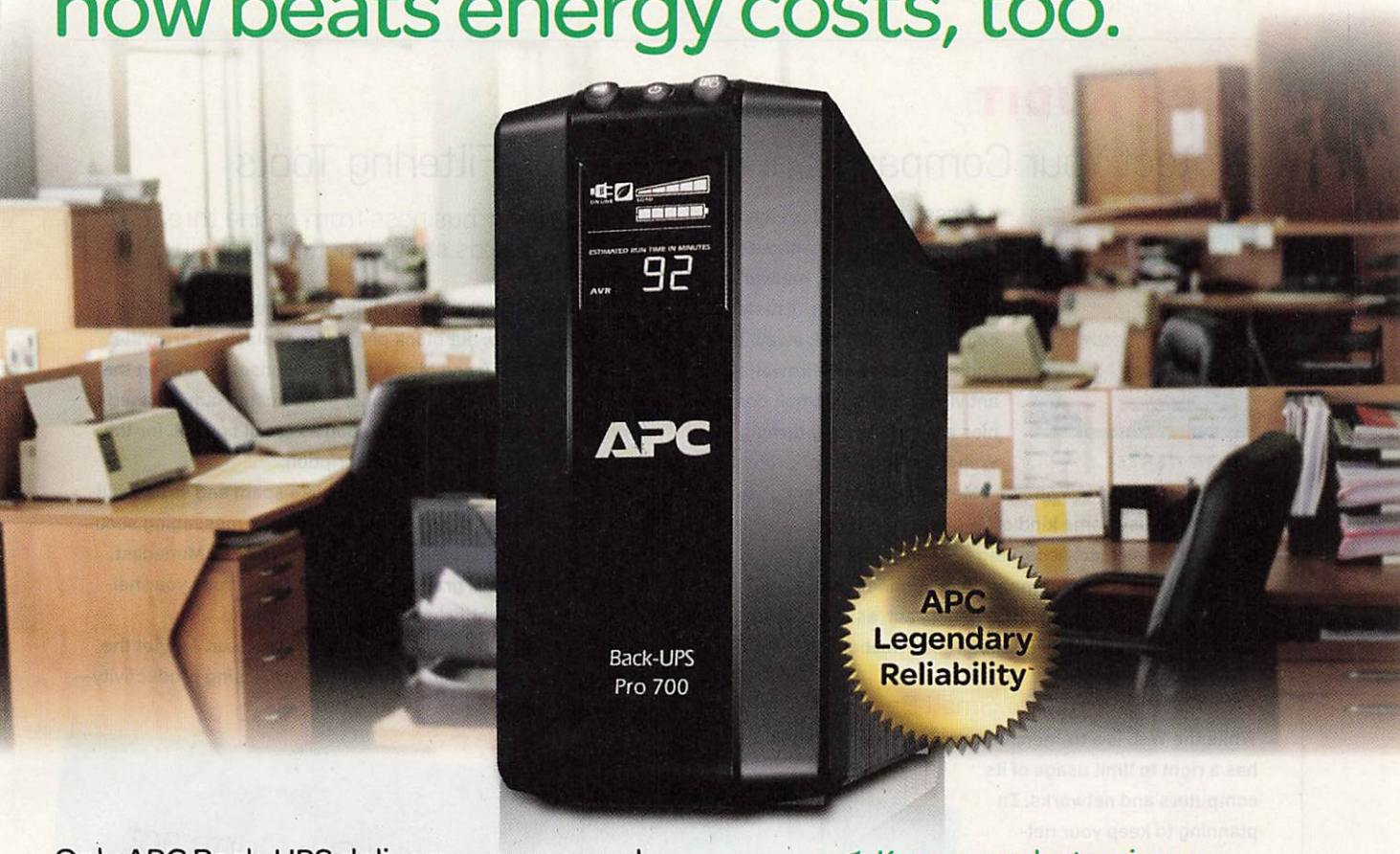
LogMeIn Ignition (Android, iPad): For its combination of performance and flexibility, this $30 app rises to the top of our iPad app test group. It isn't the biggest bargain, but the others can't match its speed and simplicity.

SplashTop Remote Desktop (Android, iPad): Like Wyse, this $5 app supports VNC (virtual network computing), and it has the simplest interface, but you'll have to deal with slow screen redraws and occasional disconnects.

Wyse Pocket Cloud Pro (Android, iPad): Looking for a low-cost, business-grade app with versatile connectivity options? Consider this $15 download—establishing a remote connection is easy, and it supports multiple connections.

PHOTOGRAPH: ROBERT CARDIN

Unbeatable power protection now beats energy costs, too.



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Unique energy-efficient features

Power-saving outlets automatically shut off power to unused devices when your computer and peripherals are turned off or on standby. Automatic voltage regulation (AVR) adjusts the undervoltages and overvoltages without using the battery. With our patent-pending AVR bypass, the transformer kicks in only when needed and automatically deactivates when power is stable. Plus, highly efficient APC designs reduce power consumption when power is good and extend runtimes when the lights go out. Together, these power-saving features eliminate wasteful electricity drains, saving you about $40-50 a year. And managing today's Back-UPS couldn't be easier thanks to an integrated LCD that provides diagnostic information at your fingertips.

Trusted insurance for all your business needs

The award-winning Back-UPS provides reliable power protection for a range of applications: from desktops and notebook computers to wired and wireless networks to external storage. The reinvented APC Back-UPS is the trusted insurance you need to stay up and running and reliably protected from both unpredictable power and energy waste!

Keep your electronics up and your energy use down!

Back-UPS models are available with the features and runtime capacity that best suit your application, and many models have been designed with power-saving features to reduce costs.

The high-performance Back-UPS Pro series

High-performance Back-UPS Pro units deliver cost-cutting, energy-efficient features. Power-saving outlets automatically shut off power to unused devices when your computer and peripherals are turned off or on standby, eliminating costly electricity drains. *(BR700G shown above)*

The energy-efficient ES 750G

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TECH AUDIT

Protect Your Company Online With Web Filtering Tools

ELSA WENZEL

ACCESS TO THE Net is vital for doing business, but without safeguards in place, malware, data leaks, and other disasters can be a mouse click away. In addition to network firewalls and antivirus software, small companies are increasingly turning to Web filtering tools for protection.

More than 41 percent of small businesses use some kind of Web filtering, and two-thirds of large companies do, according to research firm IDC.

But protecting your company from online threats, lost work hours, and rising costs is a balancing act, as more staffers use consumer tools such as Dropbox and Facebook at the office.

To shield your business from online threats, your safeguards should include Web filtering.

Internet Security for Small Business

While the Web is a tremendous productivity tool, your company has a right to limit usage of its computers and networks. In planning to keep your networks and data secure, consider your budget, your legal needs, and your company's size and culture.

The goal of landing an aerospace contract motivated one Houston manufacturer to enable Web filtering with a new firewall as part of a security overhaul, as described in the case study at right.

If you're starting from scratch in setting basic Internet security, look for products with multiple functions. Business-friendly routers with integrated firewalls and built-in unified threat management are ideal for smaller organizations. Or your ISP may offer security tools, such as a firewall and Web monitoring, along with Internet service and a router.

Web filtering starts with basic URL blocking. More sophisticated controls let you decide what functions users can access at specific sites. You can allow Facebook, for instance, but block people from playing FarmVille.

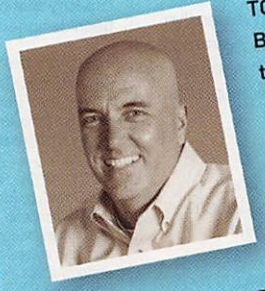
Cisco, McAfee, Trend Micro, and WebSense are among the big brands in Web filtering. Plenty of dedicated cloud-based services provide Web security, such as email control, for the cost of a monthly or annual subscription.

Besides stopping inbound threats like spam and viruses, filters also can help prevent outbound threats; messaging security products, such as those from Google Postini, Mimecast, and Symantec, have granular filters that can crawl your network and help identify leaks of confidential info.

But make sure that company policies are clear. And let the tools do their job; you don't want to end up losing productivity—or valued employees. ●

CASE STUDY

Security Upgrade Helps Land Big Contract



RICHARD WINGFIELD, owner of Envision Design.

TO SECURE A government contract, IBSCO (Intercontinental Bearing Supply Company) of Houston had to enhance its security and modernize its IT infrastructure.

IT consulting firm Envision Design in Houston installed a comprehensive security system with intrusion detection and prevention, a Kerio Control network firewall with Web filtering, and a Sophos antivirus filter.

The firewall software runs on a customized appliance that is well equipped to handle malware threats. In addition, the subscription-based filtering service offers a full range of highly tunable controls, from blocking all social media sites down to preventing banner ads.

The tech overhaul cost about $5000, with no downtime; and with the new security system, IBSCO now pays about half of what it used to on security maintenance, a savings of several thousand dollars per year. Web filtering has helped to boost the efficiency of the company's 35-person staff while limiting the firm's exposure to sites that may contain malware. And IBSCO won the government contract it sought, having shown that it could satisfy all the contract's requirements.

—Case study submitted by Envision Design (envisiondesign.net)

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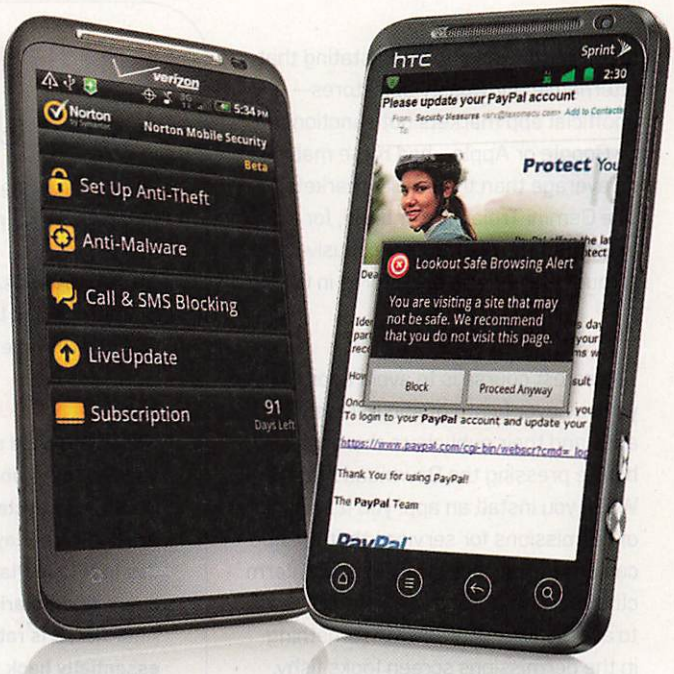
Security Alert

Mobile Malware Reality Check

Smartphone malware isn't yet as big a threat as you might think, but it's coming. Here are some tips to help you avoid it.

BY ARMANDO RODRIGUEZ



SMARTPHONE SECURITY software from Symantec (left) and Lookout can help protect mobile devices from malware infection.

MALICIOUS SOFTWARE IS leaping from PCs to cell phones, as malware makers target the platform in hopes of making a quick buck. Examples include the infected DroidDream and Plankton Android apps. An infected app released into the Android Market can infect several thousand users' phones before anyone discovers the presence of the malware.

In the DroidDream incident, several thousand people downloaded software infected with a Trojan horse that rooted their phone and sent data such as the user's location and phone number to a remote server. That same day, Google killed the contaminated apps in the Android Market, wiped the apps from phones remotely, and issued an update to patch and repair the damage that the DroidDream Trojan horse had done.

Because of how Android apps are built, a malware writer can disassemble a popular app, repackage it with malware, and reupload it to the Android Market with a slightly different title.

Nevertheless, we've yet to see any mobile malware infestations or threats on the scale of desktop PC problems. Thus far, all of the reported mobile malware incidents have been small, isolated outbreaks that malware fighters have patched or identified within several hours of their appearance. According to Symantec, it's still early in the smartphone malware game; and though the threat may seem overblown today, outbreaks are nevertheless very likely to increase in the future.

Threats to Watch Out For

Malware makers favor Android because it is an open platform that allows users to load custom applications onto their devices. But other mobile gadgets are at risk of malware, too.

In its closed app ecosystem, Apple screens apps to ensure that they don't contain objectionable content. But Apple does not check every bit in every app submitted to the App Store.

In July 2010, an app called Handy Light passed Apple's screening process and appeared in the App Store. Though Handy Light looked like a simple flashlight app, it contained a hidden unofficial tethering function that let users treat their iPhones as cellular modems. Handy Light wasn't malicious, but it showed that no vetting system is entirely safe. Most of the mobile malware we've encountered so far has taken the form of infected apps on the Android platform. For a phone to become infected, its user must install the compromised app; it isn't vulnerable to drive-by downloads and other infection methods, as PCs are. That situation may change as malware makers begin to target other smartphone operating systems.

Ultimately, it's up to users to make the right decisions when choosing where to download apps and which apps to install. In June of this year, McAfee Labs released a report (at »

PHOTOGRAPH: ROBERT CARDIN

SPECIAL ISSUE **HOW TO** Use a Phone Passcode

Though passcodes aren't impervious, they form a good first line of defense in protecting your phone's data from a thief or a snoopy coworker. But choose something other than your bank PIN, and don't use a simple code like 1234.

(at find.pcworld.com/72039) stating that alternative third-party app stores—unofficial app markets not sanctioned by Google or Apple—had more malware on average than the official markets. The Gemini Trojan for Android, for example, was distributed exclusively through third-party app stores in China.

How to Protect Yourself

The safest course is to avoid apps that you've never heard of and to research apps and their publishers thoroughly before pressing the Download button. When you install an app, you'll see a list of permissions for services that the app can access on your device. But an alarm clock app, say, probably shouldn't need to access your contacts. If something in the permissions screen looks fishy, just don't download the app.

You should also be wary of what you click (or tap) while browsing the Web. In late June, mobile security company Lookout discovered malicious advertisements aimed at smartphone users and designed to trick them into installing infected apps (find.pcworld.com/72040). Some types of mobile antivirus software, like Lookout Mobile Security, have features intended to protect you from phishing attacks like these.

If possible, install antivirus software on your phone. Most big-name security companies like AVG, McAfee, and Symantec have a downloadable mobile app for protecting your phone. Besides guarding against malware, these apps have such features as the ability to lock and wipe your phone remotely. When you receive a new phone, it's a good idea to install an antivirus program before you add any other apps. That way, your phone will be better protected against malware from the get-go.

At least for the moment, smartphone malware is relatively easy to avoid; but being aware that it exists is the first step toward protecting yourself and your data from falling victim to it.

BUGS & FIXES

Adobe Users' Identities Are at Risk

Plus: Google releases seven updates for its most recent Chrome browser.

JAMES MULROY

ADOBE HAS RELEASED fixes for products including ColdFusion and LiveCycle. Meanwhile, Google has updated Chrome to correct several weaknesses.

Multiple Adobe Patches

Adobe released six security updates to patch vulnerabilities in Acrobat, BlazeDS, ColdFusion, Flash Player, LiveCycle, Reader, and Shockwave Player. Two of the updates are for Adobe Flash Player. According to Adobe, CVE-2011-2107 addresses vulnerabilities in "Flash Player 10.3.181.16 and earlier versions for Windows, Macintosh, Linux, and Solaris, and Adobe Flash Player 10.3.185.22 and earlier versions for Android"; it is rated important. If you visited a malicious site, an attacker could essentially hack you. The fix involves updating to 10.3.181.22 (Windows, Macintosh, Linux and Solaris) or to 10.3.185.23 (Android and ActiveX).

Adobe corrected similar problems with ColdFusion 9.0.1 and earlier versions for Windows, Macintosh, and Unix that would allow a user to forge your identity.

Adobe also patched critical flaws in Reader 10.0.1 and earlier (Windows), Reader 10.0.3 and earlier (Mac), and Acrobat 10.0.3 and earlier (Windows and Mac) that could cause an app to crash and let an attacker take control of your system. Another Adobe patch addressed vulnerabilities in Shockwave Player 11.5.9.620 and earlier (Windows and Mac) that could let an attacker run malicious code on your system. Adobe Reader users should update to Reader X 10.1 (or to Reader 9.4.5 or 8.3). If you use Acrobat, update to Acrobat X 10.1 (or to 9.4.5 or 8.3); Shockwave Player users need 11.6.0.626.

You should install all of these fixes at once. For more information about each Adobe update—and to download them manually—visit find.pcworld.com/72041.

Updates to Latest Chrome

Google has updated its Chrome browser to version 12.0.742.112 for all platforms, including an update to Adobe Flash Player 10.3.181.34. Among the available patches are updates for six vulnerabilities rated high and one rated medium.

The Chrome updates deal with memory corruption, string handling, and HTML code, among other things. At this writing, specific information about the bugs is private, but Google will release the information to the public once a significant portion of the user base has updated to the most recent version of Chrome. Like most bugs, the vulnerabilities put your information at risk to attackers.

To obtain the fixes, update your Chrome Web browser to the latest version. For more information, go to find.pcworld.com/72042.

ILLUSTRATION: GARY NEILL

450Mbps

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450Mbps Dual Band
Wireless N USB Adapter
TEW-684UB

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Danish Proposal Would Nullify Net Anonymity

A WORKING GROUP at the Danish Ministry of Justice has put forward a proposal that would effectively eradicate anonymous use of the Internet, according to *Computerworld Denmark*.

The proposal would require open Internet locations, such as cafés and libraries, to confirm a user's identity before granting the individual access to the Web. Data harvested from the open Internet locations—including, but not limited to, IP addresses, browser histories, and records of other people with whom the user has interacted—would then be reported to the Danish government, all in the name of helping the country combat terrorism.

If adopted, this proposal would make companies of all sizes responsible for providing login codes and for tracking employee activity on encrypted networks. As a result, private company data would pass out of each business's control and into the government's hands, raising various security risks related to data collection, storage, and transfer.

Ultimately the proposal would bring Internet use in Denmark under a level of government oversight associated more with nations such as Iran and China than with Western Europe. But even China, known for its restrictive policies on Internet freedom, doesn't have a law as aggressive as this one.

More generally, the Danish proposal would abolish the controversial yet culturally important actions of political dissenters who run groups like Anonymous, who organize and broadcast political upheavals like the recent ones in Egypt and Iran, or who want to express themselves—whether artistically or otherwise—in a viable forum.

—Brennon Slattery

PRIVACY WATCH

Tor Network Cloaks Your Browsing

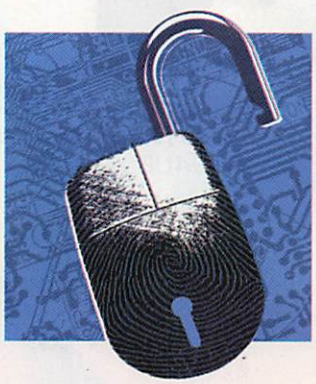
ALEX WAWRO

This free network helps journalists, activists, and government agents stay anonymous on the Internet.

YOU ARE NOT anonymous on the Internet. You may practice safe surfing by keeping your name, credit card number, and other private data off the Web, but telecom companies and search engines can still log your activities, and smart snoopers can mine these logs for your IP address and browsing history to figure out where you live, what you like, and who you've been talking to.

For true privacy while surfing the Web, you need to encrypt the data that you exchange with websites and mask where the data is coming from. Enter the Tor Network, a free service maintained by the nonprofit Tor Project and a worldwide network of volunteers who are dedicated to keeping the Internet free and private.

When it loads a Web page, your browser submits a request for the data on that page and returns it to your home PC. With the Tor Network's servers, your request enters the Tor Network via an entry point known as a *relay*. Most relays are servers running a copy of the Tor software, which encrypts the request and sends it through a random series of server relays to confuse surveillance and frustrate anyone monitoring your Internet activity.



Obscuring Your Route

As your request passes through nodes, layers of encryption strip off, until your request hits an exit relay and returns to the Internet to request data from the Web page that you are trying to visit. Even if the server hosting that Web page logs your search queries or IP, the data isn't associated with your name. Backtracking the request to your location is much more difficult, too, because after the server dispatches the relevant data, the data bounces back through the Tor network before arriving at your home PC.

Tor is free, and hackers, privacy enthusiasts, and Egyptian and Iranian political dissidents have used it with great success to elude government surveillance. To access the Tor Network, download the Tor browser bundle (find.pcworld.com/71973); this includes an older copy of Firefox with the Torbutton extension, so you can enable or disable browsing through the Tor Network with the click of a button.

Unfortunately, browsing the Web anonymously through Tor is glacial: Whenever you access a new page, you have to jump through multiple nodes in the Tor Network, which shares fewer than 1000 nodes among all Tor users. You can't do anything to accelerate the routing of your requests through the Tor Network, but you can lighten the congestion by running your own Tor relay. It's less complicated than you think; for detailed instructions, visit find.pcworld.com/71974. Volunteer to run a server relay, and help keep the Internet open and anonymous. ●

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i5	i5-2500K 3.30Ghz $ 1005; i5-2500 3.30Ghz $ 995; i5-2400 3.10Ghz $ 975; i5-2300 2.80Ghz $ 965	From		$879

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Reviews & Rankings

HP'S TOUCHSMART 610 Quad (left), Sony's VAIO VPC L218FX/W.

The Best New All-in-Ones

The desktop PC has evolved, ditching boxy shells, a multitude of peripherals, and rats' nests of messy cabling in favor of attractively designed machines that are light on hassle.

ALL-IN-ONES HAVE many advantages over standard desktop PCs. They take up far less space; they offer high-fidelity speakers and multitouch displays; and when paired with a wireless keyboard and mouse, they eliminate cable clutter.

On the other hand, they're very difficult to upgrade, they tend to be slower than tower-based PCs, and they command a price premium.

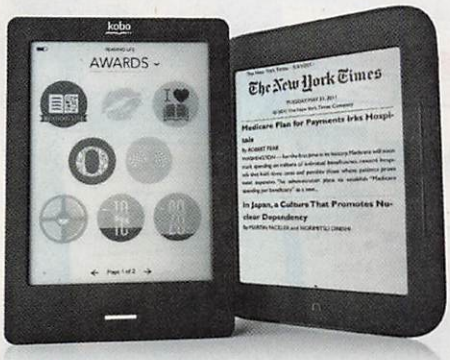
Still, recent strides in CPU design from AMD's Fusion and Intel's Sandy Bridge platforms have cut power consumption while improving performance, resulting in faster, thinner PCs. If you're in the market for an all-in-one, check out these models that have recently passed through the PCWorld Labs.

HP TouchSmart 610 Quad

Our $1849 review unit of this 23-inch all-in-one included an Intel Core i7-870 quad-core processor running at 2.93GHz, 8GB of DDR3 RAM, 1TB of hard-drive space, and an ATI Radeon HD 5570 graphics card. It earned a score of 135 in our WorldBench 6 benchmark suite, one of the highest marks we've seen for an all-in-one.

Our TouchSmart 610 Quad maintained an acceptable frame rate of 47 frames per second while running Unreal Tournament 3 at a resolution of 1680 by 1050 pixels on the highest graphical settings. In Dirt 2, however, its frame rate dropped to 22 fps at the same settings. Still, those numbers represent the strongest gaming performance of any all-in-one PC

PHOTOGRAPHS: ROBERT CARDIN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46 KOBO, BARNES & NOBLE E-Readers

54 TOP 10 DSLR Cameras

57 HTC Sensation 4G

tested by the PCWorld Labs.

The TouchSmart 610 Quad is slim and compact, with a hefty black plastic housing that includes a pair of USB ports on the left edge, plus headphone and audio-out jacks, a six-in-one card reader, and volume controls. Along the right side HP puts a pair of HDMI inputs and a slot-loading DVD drive that you can upgrade to a Blu-ray drive. Everything else—two more USB ports, two USB 3.0 ports, a TV tuner, and the power jack—lies concealed under the sliding rear panel. The front has an adjustable webcam and a microphone.

The unit's swivel stand enables the screen to slide both forward and down for comfortable prolonged use of the excellent and responsive touchscreen. Slide the screen all the way down, and the all-in-one comes to rest atop the base at roughly a 30 degree angle, nearly parallel to the desk. Adjusting the unit up and down takes some practice—sliding the screen requires a significant amount of force, however.

HP's own TouchSmart 4.0 gesture-control software supplies the best touchscreen interface we've seen.

The TouchSmart 610 Quad shines as a home media center. The 1920-by-1080-pixel LED screen boasts an impressively wide viewing angle that ensures images remain bright and colorful even when viewed from as far as 60 degrees off-center, and streaming movies look terrific on the 1080p display.

Sony VAIO VPC L218FX/W

The 24-inch Sony VAIO VPC L218FX/W is a real beauty, but unfortunately it carries a daunting price tag of $2049.

Our test model came configured with a 2GHz Sandy Bridge Core i7-2630QM processor, which features four physical cores that can jump to a virtual eight thanks to Intel's Hyper-Threading technology; automatic overclocking—aka Turbo Boost—can power the CPU up to 2.9GHz. You also get a capacious 2TB hard drive and 8GB of DDR3-677 memory.

The L218FX/W delivered a WorldBench 6 score of 116.

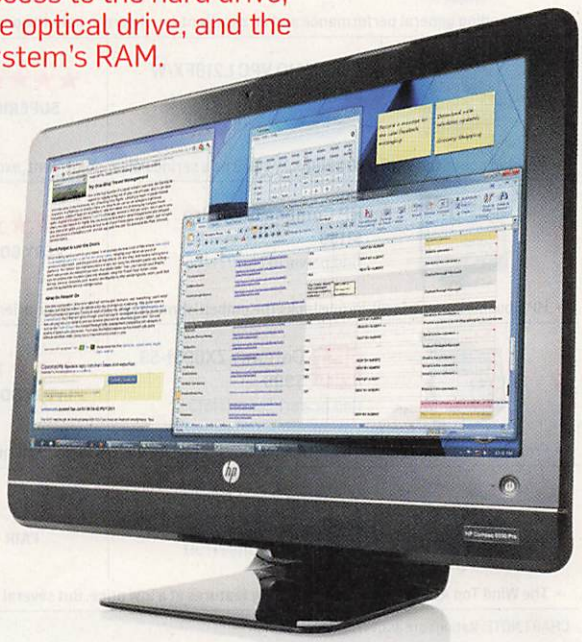
On our Unreal Tournament 3 test at a resolution of 1680 by 1050 pixels (and high quality), the L218FX/W sustained a frame rate of 67 fps.

The L218FX/W's thick black bezel serves as a navigational element: Depending on where you touch it, you can launch applications and perform various system functions.

The screen's display quality is strong, but the multitouch panel is a bit prone to glare as a »

HP's Compaq 6000 Pro

is one of the most upgradable all-in-one PCs we've ever seen, offering easy access to the hard drive, the optical drive, and the system's RAM.



MORE ONLINE

» For complete reviews of the all-in-one PCs we tested for this story, go online to find.pcworld.com/72061.

Gateway's ZX6951-53

captures our Best Buy award with a combination of an attractive design, superior performance, a generous 23-inch screen, and a bargain price.

result of its glossy surface. Another plus: We loved the all-in-one's built-in sound.

On the side of the PC, you get a multiformat card reader, a mini-FireWire 400 port, two USB 3.0 connections, and headphone and microphone jacks. On the rear are three USB ports, a coaxial-cable input, gigabit ethernet, HDMI input and output ports, and a composite-video input. A wireless mouse and keyboard ship with the unit.

HP Compaq 6000 Pro

Carrying a 21.5-inch display, the business-centric HP Compaq 6000 Pro ($1139) earned a WorldBench 6 score of 116. Components include a 3GHz Core 2 Duo processor, 4GB of DDR3 RAM, a 500GB hard drive, and an Nvidia GT 230 GPU. It runs the 64-bit version of Windows 7 Professional.

The Compaq 6000 Pro achieved a frame rate on our Unreal Tournament 3 benchmark (at 1680 by 1050 resolution, and highest settings) of 35 fps. Display quality is fine but unspectacular, with flawless video playback, but the display is not a touchscreen. The system's built-in speakers are adequate, serving up clear, crisp audio.

Among the Compaq 6000 Pro's connectivity options are a multiformat card reader, a pair of USB ports, headphone and microphone jacks, and a four-pin FireWire port (all on the front), plus five more USB ports (on the back). Located on the back as well are PS/2 serial connectors for a mouse and keyboard; a DisplayPort connector and an audio output jack; gigabit ethernet; and built-in 802.11n connectivity.

When it comes to upgrade

TOP 5 ALL-IN-ONE DESKTOP PCs

	MODEL	Rating	Performance	Features and specifications
1	HP TouchSmart 610 Quad $1849 find.pcworld.com/71785	★★★★½ SUPERIOR	• WorldBench 6 score: 135 • WorldBench 6 rating: Superior • Overall design: Very Good	• 2.93GHz Core i7-870 • 8GB RAM; 1TB storage • ATI Radeon HD 5570 • DVD-RW drive
	▸ Outstanding general performance and an excellent touchscreen help the powerful TouchSmart 610 stand out from the all-in-one desktop crowd.			
2	Sony VAIO VPC L218FX/W $2049 find.pcworld.com/71907	★★★★½ SUPERIOR	• WorldBench 6 score: 116 • WorldBench 6 rating: Very Good • Overall design: Very Good	• 2GHz Core i7-2630QM • 8GB RAM; 2TB storage • Nvidia GT 540M • Blu-ray drive
	▸ Nothing about the VAIO VPC L218FX/W rates as a serious disappointment, except for its price: You'll pay a pretty penny for the near-perfection of this all-in-one.			
3	HP Compaq 6000 Pro $1139 find.pcworld.com/71786	★★★★ VERY GOOD	• WorldBench 6 score: 116 • WorldBench 6 rating: Very Good • Overall design: Very Good	• 3GHz Core 2 Duo • 4GB RAM; 500GB storage • Nvidia GT 230 • DVD-RW drive
	▸ HP's business-centric all-in-one lacks the embellishments of consumer-oriented machines, but it provides strong performance and some room to tinker.			
4	BEST BUY Gateway ZX6951-53 $999 find.pcworld.com/71513	★★★½ VERY GOOD	• WorldBench 6 score: 121 • WorldBench 6 rating: Superior • Overall design: Good	• 3.2GHz Core i3-550 • 4GB RAM; 640GB storage • Intel integrated graphics • Blu-ray drive
	▸ From its looks and sound to its HD support and speed, Gateway's 23-inch all-in-one desktop delivers a strong package of features for a bargain price.			
5	MSI Wind Top AE2050 $680 find.pcworld.com/71790	★★ FAIR	• WorldBench 6 score: 53 • WorldBench 6 rating: Poor • Overall design: Fair	• 1.6GHz AMD Fusion E-350 • 4GB RAM; 1TB storage • AMD Radeon HD 6310 • DVD-RW drive
	▸ The Wind Top AE2050 delivers compelling features at a low price. But several critical compromises keep it from surpassing inexpensive peers.			

CHART NOTE: Ratings are as of 7/13/11.

PHOTOGRAPHS: ROBERT CARDIN

opportunities, the Compaq 6000 Pro is leagues ahead of most competing all-in-ones. You can swap out the system's RAM, hard drive, and optical drive by removing panels on the rear of the chassis. The unit is also VESA-mount compliant, for strapping to an articulating arm or attaching to a wall.

The bundled wireless keyboard and mouse are standard HP fare: The keyboard offers some media-playback controls and is comfortable to type on; the mouse is undistinguished but functional. Software includes HP's ProtectTools and a trial of HP's Virtual Rooms software for collaborative projects.

Gateway ZX6951-53

This 23-inch, $999 all-in-one desktop is impressive for quite a few reasons.

First, and perhaps most noticeable, is the system's curved design—a departure from the standard square build we've seen on just about every all-in-one that has come through our gates. Second, and a bit less noticeable, is the machine's very respectable speed: This 1920-by-1080-resolution model parlayed its 3.2GHz Intel Core i3-550 CPU and 4GB of DDR3 memory into a score of 121 on WorldBench 6. The ZX6951-53 provides 640GB of storage space and comes configured with a Blu-ray combo drive, too.

The ZX6951-53's multitouch panel offered pleasing picture quality. Though the glossy display at times invited glare, depending on the viewing angle (and the environment where we tested the system), it contributed to the all-in-one's excellent contrast levels. Strong blacks and evocative whites brought out key details within the images and movies we viewed in our tests. The display's saturation wasn't quite as good, however. We were happily surprised by the audio system's bass-heavy, enveloping sound.

Aside from the Blu-ray combo drive, the ZX6951-53 has two USB ports and a single multiformat card reader on its sides, plus six USB ports, a VGA output, a gigabit ethernet port (in case you prefer a cabled connection to the built-in Wireless-N functionality), and a coaxial connection on the rear. Regrettably, you can't upgrade the ZX6951-53 at all. The system comes with three input devices: a remote, a generic wireless mouse, and a generic wireless keyboard.

MSI Wind Top AE2050

MSI's latest all-in-one is all about accepting compromises in performance in return for achieving a very attractive sticker price ($680).

Running AMD's low-cost, 1.6GHz Fusion E-350 CPU, the Wind Top AE2050 ambled to an unimpressive WorldBench 6 score of 53.

The all-in-one's integrated Radeon HD 6310 graphics failed to achieve playable frame rates in our gaming benchmarks at any resolution above 1024 by 768.

The AE2050's display did an admirable job with color saturation, but grayscales looked somewhat murkier.

Video playback performance (DVD only, not Blu-ray) is the AMD E-350 CPU's strong point. High-definition (720p) media was stutter-free. The AE2050's speakers delivered laptop-quality sound. A 1TB hard drive is another system highlight.

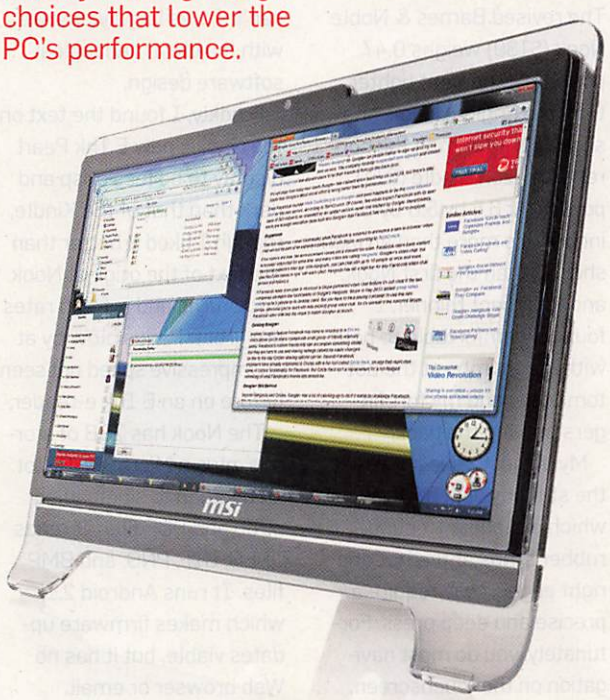
MSI supplies two USB 3.0 ports on the all-in-one's side—a delightful addition for the system's price. In addition, 802.11n networking is built right into the system.

MSI's Super Charger technology converts one of the USB 3.0 ports into a dedicated device charger that works even when the PC is off, and that the company says will reduce the AE2050's charging time by up to 40 percent. A multiformat card reader joins the ports on the system's side, while the rear of the AE2050 hosts a single HDMI port, four more USB ports (2.0 this time), and a gigabit ethernet port.

The stand that props the AE2050 up at a particular angle is difficult to manage and set, and minutely tweaking the setup to achieve the perfect viewing angle is a challenge. The wired keyboard and mouse that MSI packed with our test machine were strictly generic.

—Nate Ralph

MSI's Wind Top AE2050 carries an impressively low sticker price of $680, but MSI achieves that by making design choices that lower the PC's performance.



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By ROBERT PEAR
WASHINGTON — For the first time in its history, Medicare will soon track spending on millions of individual beneficiaries, reward hospitals that hold down costs and penalize those whose patients prove most expensive. The administration plans to establish "Medicare spending per beneficiary" as a new...
In Japan, a Culture That Promotes Nuclear Dependency
By MARTIN FACKLER and NORIMITSU ONISHI

◀ THE KOBO EREADER Touch Edition (left) and the Barnes & Noble Nook each have Neonode zForce touchscreen technology.

Barnes & Noble, Kobo E-Readers Challenge the Amazon Kindle

BOOK LOVERS HAVE many e-readers to choose from these days. I recently looked at two new models.

Barnes & Noble Nook

The revised Barnes & Noble Nook ($139) weighs 0.47 pound—35 percent lighter than the original Nook, and slightly lighter than the current Amazon Kindle (0.60 pound). At 6.5 by 5.0 by 0.5 inches, it's more than an inch shorter than the first Nook, and 6 percent thinner. I found it comfortable to hold with my thumbs at the bottom bezel and my forefingers bracing the back.

My biggest gripe concerns the stiff physical buttons, which are cheap-feeling rubber strips at the left and right edges; they require a precise and deep press. Fortunately, you do most navigation on the touchscreen, which is highly responsive—the Nook's on-screen keyboard even kept up with my speedy touch typing. Though it isn't always clear where you can swipe and where you can't, I was largely pleased with the clean and logical software design.

Frankly, I found the text on the Nook's new E Ink Pearl display to be less crisp and dark than that of the Kindle, though I liked it better than the text of the original Nook. Page turns and refresh rates are great: Pages blow by at an impressive speed not seen before on an E Ink e-reader.

The Nook has 2GB of storage, plus a MicroSDHC slot. In addition to sideloading ePub and PDF files, it reads JPEG, GIF, PNG, and BMP files. It runs Android 2.1, which makes firmware updates viable, but it has no Web browser or email.

Setting up the 802.11 b/g/n Wi-Fi is easy. As for battery life, Barnes & Noble says that the Nook can last up to 2 months on a single charge with Wi-Fi turned off.

Kobo Touch Edition

The eReader Touch Edition ($130), Kobo's third e-reader, lacks the finesse of the new Nook and the Kindle, but it still has much to offer.

Weighing just 0.44 pound, it's the same height as the Nook, but it measures a half-inch narrower, and a smidgen less deep. It's the easiest e-reader to hold in one hand.

At the left is a MicroSDHC slot for adding up to 32GB of storage; on the bottom is the Micro-USB port for charging and for sideloading material via a PC. The built-in battery is rated for about one month.

The touchscreen is suitably responsive for navigation and typing, but I was prone to errors due to the on-screen keyboard's tight, cramped layout.

On the 6-inch E Ink Pearl display, text looked good—darker than on the Nook, but not as nice as on the Kindle. As I paged through books, though, the background often became a bit muddied with echoes of previous pages. Eventually the effect would fade, but occasionally it hurt readability. Kobo says it is looking into the issue.

One distinctive aspect of the Touch Edition is its support for Kobo's Reading Life social network, which tracks statistics such as how many pages you've turned, and how many books you've read. The optional feature allows you to share your status via Facebook, as well as to earn awards for your progress.

—Melissa J. Perenson

★★★★☆ **VERY GOOD**
Nook (second generation)
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E-reader has many appealing elements, but buttons are stiff.
List: $139
find.pcworld.com/71931

★★★½☆ **VERY GOOD**
eReader Touch Edition | Kobo
Slim e-reader has a responsive touchscreen but lacks finesse.
List: $130
find.pcworld.com/71932

PHOTOGRAPH: ROBERT CARDIN

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Top 10 Color Laser Multifunction Printers

LAB TESTED

	MODEL	Rating	Performance	Features and specifications
1	BEST BUY Brother MFC-9970CDW $700 NEW find.pcworld.com/71935	★★★½☆ VERY GOOD	• Text quality: Superior • Photo quality: Good • Tested speed (ppm): 15.7 text/ 3.2 photo	• USB, ethernet, wireless connectivity • 300-sheet standard input, automatic duplexing • Average toner cost per page (editorial research): 1.9 cents for black, 12.7 cents for all four colors
	▸ A 5-inch color touchscreen enhances this small-office/workgroup machine. It's also fast, and it has Wi-Fi and inexpensive toner.			
2	Brother MFC-9560CDW $650 NEW find.pcworld.com/71936	★★★½☆ VERY GOOD	• Text quality: Superior • Photo quality: Good • Tested speed (ppm): 15.0 text/ 3.0 photo	• USB, ethernet, wireless connectivity • 300-sheet standard input, automatic duplexing • Average toner cost per page (editorial research): 1.9 cents for black, 12.7 cents for all four colors
	▸ Speed, economical toner, and Wi-Fi are the highlights of this small-office and workgroup model. The photo quality is acceptable.			
3	Lexmark X548dte $1749 NEW find.pcworld.com/71937	★★★½☆ VERY GOOD	• Text quality: Superior • Photo quality: Good • Tested speed (ppm): 14.5 text/ 2.5 photo	• USB, ethernet connectivity • 900-sheet standard input, automatic duplexing • Lowest vendor-specified toner cost per page: 1.7 cents for black, 11.9 cents for all four colors
	▸ This heavy-duty model has both speed and paper capacity to spare, but only its extra-high-yield toner is a good deal.			
4	Samsung CLX-6220FX $699 find.pcworld.com/70869	★★★½☆ VERY GOOD	• Text quality: Superior • Photo quality: Good • Tested speed (ppm): 11.5 text/ 3.1 photo	• USB, ethernet connectivity • 350-sheet standard input, automatic duplexing • Lowest vendor-specified toner cost per page: 2.4 cents for black, 12.9 cents for all four colors
	▸ Small workgroups will like this color MFP's features and print quality, which balance out its middling performance and toner costs.			
5	Oki MC561 Color MFP $750 NEW find.pcworld.com/71938	★★★☆☆ GOOD	• Text quality: Superior • Photo quality: Fair • Tested speed (ppm): 17.6 text/ 2.6 photo	• USB, ethernet connectivity • 350-sheet standard input, automatic duplexing • Lowest vendor-specified toner cost per page: 2.1 cents for black, 14.8 cents for all four colors
	▸ This model shines with speed, paper handling, and reasonably priced toner, but its graphics quality is mediocre.			
6	Oki MC361 Color MFP $549 NEW find.pcworld.com/71939	★★★☆☆ GOOD	• Text quality: Superior • Photo quality: Fair • Tested speed (ppm): 15.2 text/ 2.5 photo	• USB, ethernet connectivity • 350-sheet standard input, automatic duplexing • Lowest vendor-specified toner cost per page: 2.8 cents for black, 17.4 cents for all four colors
	▸ You get good speed and paper handling for the price, but the MC361's color quality and color-toner costs are disappointing.			
7	Canon Color ImageClass MF9220Cdn $999 find.pcworld.com/71551	★★★☆☆ GOOD	• Text quality: Superior • Photo quality: Fair • Tested speed (ppm): 12.8 text/ 3.5 photo	• USB, ethernet connectivity • 350-sheet standard input, automatic duplexing • Average toner cost per page (editorial research): 2.0 cents for black, 10.2 cents all four colors
	▸ Canon's big MFP has many small problems, such as complex controls, minimal Mac support, and mediocre photos. Toner costs seem low.			
8	Xerox WorkCentre 6505/DN $749 NEW find.pcworld.com/71940	★★★☆☆ GOOD	• Text quality: Superior • Photo quality: Good • Tested speed (ppm): 15.1 text/ 2.0 photo	• USB, ethernet, connectivity • 250-sheet standard input, automatic duplexing • Lowest vendor-specified toner cost per page: 3.5 cents for black, 16.7 cents for all four colors
	▸ This workgroup model offers good speed and print quality, but its talents are overshadowed by expensive toner.			
9	Dell 1355cnw $420 find.pcworld.com/71552	★★★☆☆ GOOD	• Text quality: Superior • Photo quality: Good • Tested speed (ppm): 11.1 text/ 1.4 photo	• USB, ethernet, wireless connectivity • 160-sheet standard input, manual duplexing • Lowest vendor-specified toner cost per page: 3.5 cents for black, 18.5 cents for all four colors
	▸ Best suited for small, low-volume offices, the 1355cnw offers versatile connectivity, but has limited features and pricey toner.			
10	HP LaserJet Pro CM1415fnw $450 find.pcworld.com/71553	★★★☆☆ GOOD	• Text quality: Superior • Photo quality: Good • Tested speed (ppm): 7.4 text/ 1.7 photo	• USB, ethernet, wireless connectivity • 150-sheet standard input, manual duplexing • Lowest vendor-specified toner cost per page: 3.5 cents for black, 19.0 cents for all four colors
	▸ Web and wireless connectivity are pluses, but the trade-offs are sluggish speed, limited features, and high toner costs.			

CHART NOTES: Ratings are as of 6/27/11. Output speeds are in pages per minute (ppm).

MORE ONLINE Visit find.pcworld.com/71573 to see in-depth reviews, full test results, and detailed specs for each printer on this chart.

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Premiere Pro CS5.5: Web Video Isn't Perfect Yet

LAST YEAR, Adobe's introduction of GPU acceleration to its Premiere Pro video editor speeded up tasks significantly for systems with a supported Nvidia-based graphics card. But the big story this year is the need to produce video for the Web—and in that regard, Premiere Pro CS5.5 ($799 for the full version, $179 to upgrade from the CS5 software) still has some strides to make.

Enhanced Features

When I rendered a complex project using the software only, it required 19 minutes. With GPU acceleration, it took 3 minutes, 46 seconds. Scrubbing through the timeline is smooth and effortless with the GPU features on, no prerendering necessary.

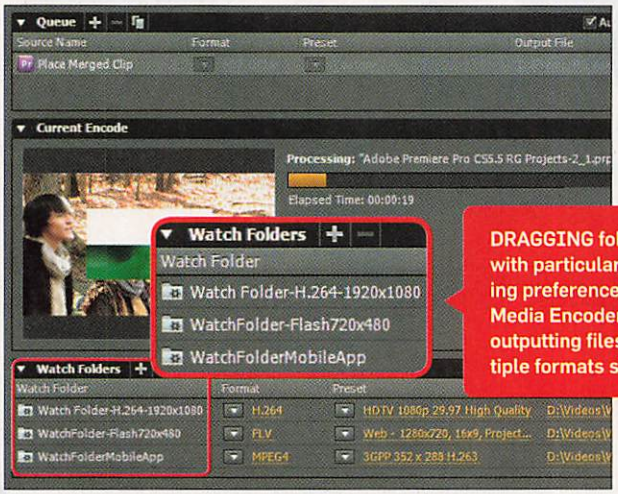
HTML 5 support is a key feature that Adobe touts in Dreamweaver CS5.5 (see page 56 in the August issue, or find.pcworld.com/71906), and one of the most important elements in HTML 5 is the <video> tag. Because browsers vary in their support for video types, designers who want to use HTML 5 will have to embed code pointing to multiple formats. But Premiere Pro CS5.5 doesn't support two of the most HTML 5–friendly formats, Ogg and WebM.

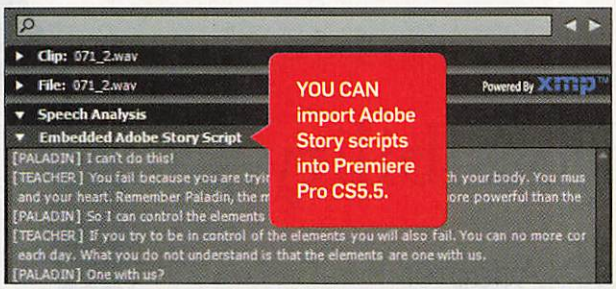
With the new version, you can drag sequences (video projects) from Premiere into the included Media Encoder app, rather than using menu commands. You can customize presets in Media Encoder, as well; once the sequences are queued up, you can then choose a preset for each.

Similarly, the improved Watch Folder feature lets you drag a folder to Media Encoder, and whenever you add an item to that folder, the app begins rendering it. You can make multiple Watch Folders and set each to output a different file type. But wouldn't it be nice if Premiere Pro generated the HTML 5 code for you, or if it could dump the code into Dreamweaver?

Like the previous Premiere, the new version has speech analysis to generate dialogue, and you can point it to a transcript file to improve accuracy. You can also attach an Adobe Story script—and as a result you can edit based on text cues set up in Story, rather than going by only visual cues. One hitch: To convert the dialogue to closed-captioned text—necessary for much public video—you can't use these tools but must export it into a third-party program.

When you're filming, getting good-quality audio can be a challenge. A new Merged Clips command in Premiere addresses the issue. You can sync up to 16 audio clips to a single video clip, and you can use in points, out points, time code, or numbered markers as sync points. Another new feature is the ability to insert or overwrite multiple clips with a merged clip.

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Embedded Adobe Story Script
[PALADIN] I can't do this!
[TEACHER] You fail because you are tryi
and your heart. Remember Paladin, the m
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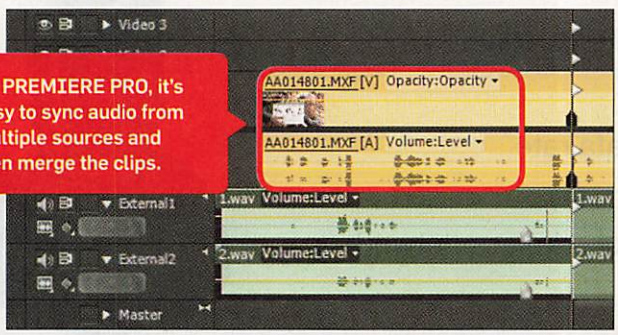
[TEACHER] If you try to be in control of the elements you will also fail. You can no more cor
each day. What you do not understand is that the elements are one with us.
[PALADIN] One with us?
YOU CAN import Adobe Story scripts into Premiere Pro CS5.5.



More Help Wanted

So far no other video editor can touch Premiere Pro CS5.5 in sheer performance. But people who are dealing with video for the Internet (I'm one of them) could use a bit more help than it offers.

—Alan Stafford

★★★★☆ **VERY GOOD**

Premiere Pro CS5.5 | Adobe

Performance is unmatched, but Web features need improvement. List: $799 full, $179 CS5 upgrade

find.pcworld.com/71941

Top 10 Desktop Replacement Laptops

LAB TESTED

	MODEL	Rating	Performance	Features and specifications
1	Dell XPS 17 3D **$2389 NEW** find.pcworld.com/71505	★★★★½ SUPERIOR	• WorldBench 6 score: 151 • WorldBench 6 rating: Superior • Overall design: Very Good • Tested battery life: 3:30	• 2.3GHz Core i7-2820QM • 17.3-inch 3D widescreen • 8.3 pounds • 1TB hard drive
	▸ Dell updates the XPS 17 with a Sandy Bridge CPU and stereoscopic 3D capability, but the latter is better for 3D Blu-ray than for games.			
2	HP Envy 17 3D **$1599 NEW** find.pcworld.com/71943	★★★★½ SUPERIOR	• WorldBench 6 score: 95 • WorldBench 6 rating: Good • Overall design: Superior • Tested battery life: 1:27	• 1.6GHz Core i7-720QM • 17.3-inch 3D widescreen • 7.3 pounds • 640GB hard drive
	▸ HP's Envy 17 3D offers robust 3D Blu-ray, but limited 3D gaming. Although it's a solid model, the short battery life is a concern.			
3	BEST BUY Asus G73SW **$1650 NEW** find.pcworld.com/71944	★★★★½ SUPERIOR	• WorldBench 6 score: 128 • WorldBench 6 rating: Superior • Overall design: Very Good • Tested battery life: 3:22	• 2.0GHz Core i7-2630QM • 17.3-inch widescreen • 8.7 pounds • 1TB hard drive
	▸ Asus's G73SW high-end gaming-oriented laptop offers good performance on modern titles without breaking the bank.			
4	Acer Aspire 8950G-9839 **$1500 NEW** find.pcworld.com/71945	★★★★☆ VERY GOOD	• WorldBench 6 score: 128 • WorldBench 6 rating: Superior • Overall design: Very Good • Tested battery life: 4:21	• 2.63GHz Core i7-2630QM • 18.5-inch touchscreen • 8.3 pounds • 750GB hard drive
	▸ Acer's digital media powerhouse provides a bright screen, but makes a few too many compromises in other respects.			
5	HP EliteBook 8740w **$3000** find.pcworld.com/71085	★★★★☆ VERY GOOD	• WorldBench 6 score: 99 • WorldBench 6 rating: Good • Overall design: Superior • Tested battery life: 1:45	• 2.4GHz Core i5-520M • 17.0-inch widescreen • 10.6 pounds • 320GB hard drive
	▸ If you're looking for a business-rugged laptop that has the power of a desktop and the sexiness of a Mac, this is the notebook for you.			
6	Asus G73Jw **$1745** find.pcworld.com/71087	★★★★☆ VERY GOOD	• WorldBench 6 score: 109 • WorldBench 6 rating: Good • Overall design: Very Good • Tested battery life: 1:48	• 1.73GHz Core i7-740QM • 17.3-inch widescreen • 8.8 pounds • 1TB hard drive
	▸ The G73Jw is a great laptop for gamers who are willing to spend some additional money on more-comfortable peripherals.			
7	Sony VAIO F-Series **$1899 NEW** find.pcworld.com/71946	★★★½☆ VERY GOOD	• WorldBench 6 score: 117 • WorldBench 6 rating: Very Good • Overall design: Very Good • Tested battery life: 2:33	• 2.0GHz Core i7-2630QM • 16.0-inch widescreen • 6.9 pounds • 640GB hard drive
	▸ Sony includes Nvidia's 3D Vision with its latest 16-inch laptop, but it's more attuned to stereoscopic movies than to games.			
8	Samsung RF710-S02 **$1049** find.pcworld.com/71088	★★★☆☆ GOOD	• WorldBench 6 score: 103 • WorldBench 6 rating: Very Good • Overall design: Very Good • Tested battery life: 2:23	• 1.6GHz Core i7-720QM • 17.3-inch widescreen • 6.5 pounds • 640GB hard drive
	▸ Samsung's modern-looking desktop replacement has solid components, but the overall implementation is slightly underwhelming.			
9	Dell Inspiron 17R **$950 NEW** find.pcworld.com/71947	★★★☆☆ GOOD	• WorldBench 6 score: 114 • WorldBench 6 rating: Very Good • Overall design: Very Good • Tested battery life: 3:33	• 2.3GHz Core i5-2410M • 17.3-inch widescreen • 7.3 pounds • 500GB hard drive
	▸ Subtle, elegant looks, decent performance, and great connectivity highlight the Inspiron 17R desktop replacement laptop.			
10	Toshiba Satellite L675D-S7106 **$700 NEW** find.pcworld.com/71948	★★☆☆☆ FAIR	• WorldBench 6 score: 78 • WorldBench 6 rating: Fair • Overall design: Very Good • Tested battery life: 2:38	• 2.0GHz Phenom II P860 • 17.3-inch widescreen • 6.1 pounds • 500GB hard drive
	▸ The L675D-S7106 is an affordable desktop replacement laptop with a nice display and acceptable performance.			

CHART NOTES: Ratings are as of 6/28/11. Tested battery life is expressed in hours:minutes. Listed weights do not include the power adapter.

MORE ONLINE Visit find.pcworld.com/70832 to see in-depth reviews, full test results, and detailed specs for each laptop on this chart.

HP TouchPad: Not Ready for the Tablet Big Leagues

THE HP TOUCHPAD is the first tablet based on the WebOS mobile operating system, which HP acquired when it purchased Palm a year ago. The TouchPad comes in two versions at launch: a 16GB model costing $499 and a 32GB model costing $599—prices on a par with those of Apple's iPad 2. A version with AT&T mobile broadband is coming.

Though WebOS shows flashes of finger-friendly brilliance (it seems far better suited for a tablet than for a phone's small screen), the TouchPad suffers from a cumbersome design, performance lags, and a poor, limited app selection.

HP's tablet does have several distinguishing features, including an immersive meshing of contacts from multiple Web services and sources, Touchstone inductive charging, and touch-to-share (a Web, phone, and messaging transfer capability that will eventually work with other HP devices).

★★½☆☆ **FAIR**

TouchPad | HP

First WebOS tablet stumbles more than it succeeds.

List: $499 (16GB); $599 (32GB)

find.pcworld.com/72043

Physical Design

The TouchPad has a 9.7-inch touchscreen display, with 18-bit color and 1024-by-768-pixel resolution. The iPad 2 has 24-bit color and the same resolution. Android tablets with 10.1-inch displays have a higher resolution (1280 by 800), but Android renders in 16-bit color.

Encased in glossy piano-black plastic, with rounded edges, the TouchPad has a less appealing look and feel than competing tablets do.

The device weighs 1.61 pounds, about the same as the heaviest Android tablets we've seen, and three-tenths of a pound heavier than the iPad 2. It's also a smidgen more than a half-inch thick.

The design strives for minimalism: It has just one button, a flat oval centered beneath the display that returns you to the home screen, and just one port, a Micro-USB connector. The

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port works for charging, as well as for transferring data.

The only other controls are the power/wake button, the volume rocker, and the headphone jack. The device also has a 1.3-megapixel front-facing camera for video chat. Unlike most competing tablets, the TouchPad lacks a rear-facing camera for still-photo and video capture.

The stereo speakers generate the best audio I've heard on a tablet so far.

Performance

Inside, the TouchPad has a 1.2GHz dual-core Qualcomm Snapdragon processor. But performance lagged in more operations than not. It did keep up with my rapid touch-typing on the screen's keyboard.

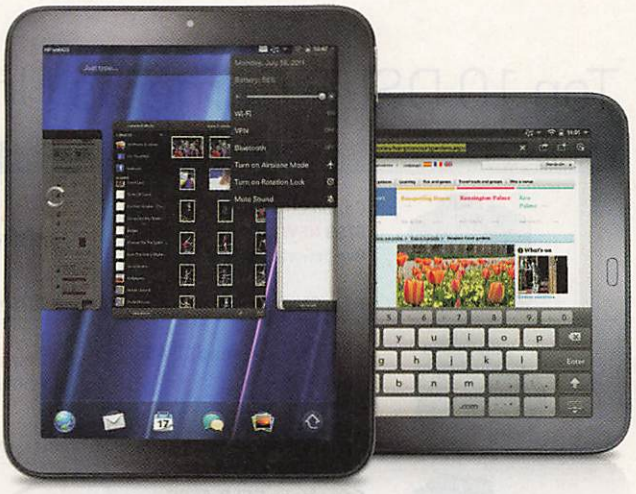
In my tests, the TouchPad felt slow from the initial boot-up, and loading apps seemed interminable.

Battery life didn't impress: In our continuous video playback test, the battery drained in just 5 hours, 25 minutes.

One plus: The TouchPad is the first tablet to make direct printing viable and simple—if you happen to have an HP wireless printer.

I encountered other issues as well, but many of them may be addressable via software fixes in the future. Until those updates come in, however, the HP TouchPad will remain a tough sell in comparison with Apple's dominant iPad 2, and even with the nearest Android rivals.

—Melissa J. Perenson



THOUGH IT HAS several nice features, HP's WebOS-based TouchPad needs more apps and some software fixes.

PHOTOGRAPH: ROBERT CARDIN

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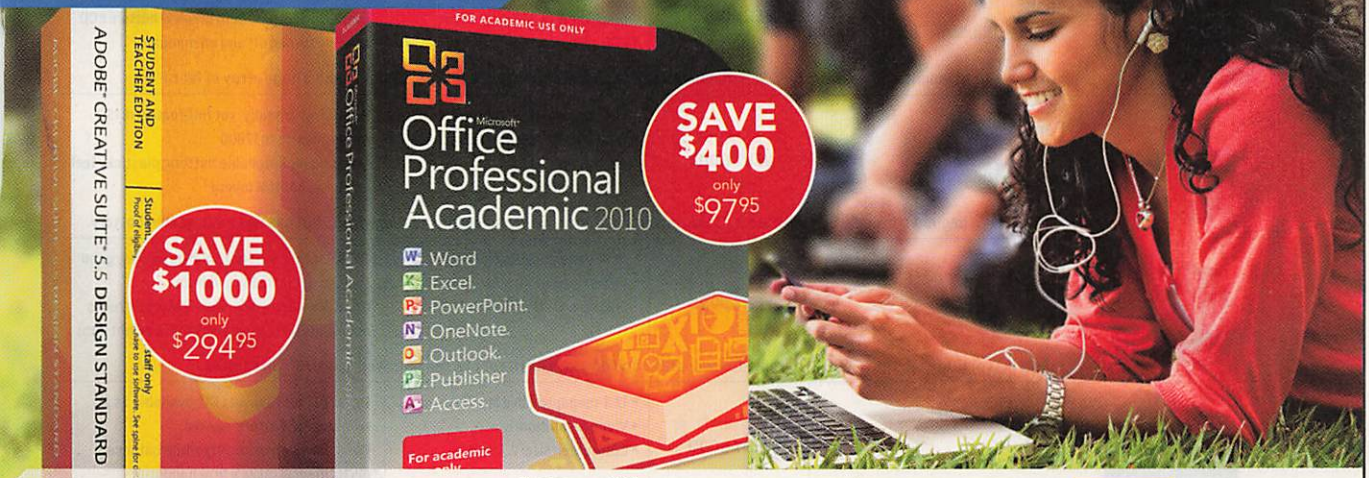

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Top 10 DSLR Cameras Under $1000

LAB TESTED

	MODEL	Rating	Performance	Pros and cons
1	Canon EOS Rebel T3i $799 NEW find.pcworld.com/72045	★★★★½ SUPERIOR	• 18.0-megapixel CMOS sensor • 1920-by-1080-pixel maximum video resolution • LCD screen size: 3.0 inches	**Pros:** Tilt-and-swivel LCD; outstanding high-ISO images; wireless flash transmitter **Cons:** Oddly placed controls; no video button; auto white balance struggles indoors
	▸ The Canon EOS Rebel T3i, with an 18-135mm f/3.5-5.6 IS optional kit lens, is a complete picture-taking and movie-making machine.			
2	BEST BUY Sony Alpha SLT-A55 $699 find.pcworld.com/72046	★★★★½ SUPERIOR	• 16.2-megapixel CMOS sensor • 1920-by-1080-pixel maximum video resolution • LCD screen size: 3.0 inches	**Pros:** Superb autofocus in video mode; fast burst mode; in-viewfinder level **Cons:** Has electronic viewfinder only; no program shift
	▸ Sony's first translucent-mirror camera offers some impressive capabilities and excellent image quality, but has no optical viewfinder.			
3	Sony Alpha DSLR-A580 $899 find.pcworld.com/72047	★★★★½ SUPERIOR	• 16.2-megapixel CMOS sensor • 1920-by-1080-pixel maximum video resolution • LCD screen size: 3.0 inches	**Pros:** Cool panoramic and noise-reduction features; very fast burst rate; tilting LCD **Cons:** Many features support only JPEG format; no autofocus in video mode
	▸ If you want video capability, the A580 has it—with an SLR's video limitations. The A580 is, first and foremost, a great still camera.			
4	Nikon D5100 DSLR $847 NEW find.pcworld.com/72048	★★★★ VERY GOOD	• 16.2-megapixel CMOS sensor • 1920-by-1080-pixel maximum video resolution • LCD screen size: 3.0 inches	**Pros:** Excellent high-ISO performance; full-time autofocus in video; tilt-and-swivel LCD **Cons:** Requires AF-S lens with built-in AF motor; lag time in video autofocus
	▸ The latest addition to Nikon's DSLR line, the D5100 fits neatly between the entry-level D3100 and the more sophisticated D7000.			
5	Canon EOS Rebel T2i $750 find.pcworld.com/72049	★★★★ VERY GOOD	• 18.0-megapixel CMOS sensor • 1920-by-1080-pixel maximum video resolution • LCD screen size: 3.0 inches	**Pros:** Very light; excellent software for both Windows and Mac; sharp, high-resolution LCD **Cons:** Plasticky feel; expensive for an entry-level kit
	▸ Canon's incremental refinements to this Rebel add up to improved image quality and movie recording that is a notable step forward.			
6	Nikon D3100 $649 find.pcworld.com/72050	★★★½ VERY GOOD	• 14.2-megapixel CMOS sensor • 1920-by-1080-pixel maximum video resolution • LCD screen size: 3.0 inches	**Pros:** Autofocus in video mode; intuitive controls and guide menu **Cons:** Autofocus makes noise in movie mode; no exposure bracketing
	▸ Though a bit pricey for an entry-level DSLR, the D3100 has great features for beginning photographers, and decent image quality.			
7	Pentax K-r $625 find.pcworld.com/72051	★★★½ VERY GOOD	• 12.4-megapixel CMOS sensor • 1280-by-720-pixel maximum video resolution • LCD screen size: 3.0 inches	**Pros:** Well-rounded feature set with a simple user interface; good high-ISO performance **Cons:** No depth-of-field preview button; LCD must be turned off and on manually
	▸ A small, lightweight, low-cost starter DSLR, the Pentax K-r is appealing thanks to its image quality and a huge array of features.			
8	Pentax K-x $649 find.pcworld.com/72052	★★★½ VERY GOOD	• 12.4-megapixel CMOS sensor • 1280-by-720-pixel maximum video resolution • LCD screen size: 2.7 inches	**Pros:** User-friendly, yet full-featured; ISO range goes up to 12800 **Cons:** No rechargeable battery; plasticky feel and basic control layout
	▸ The K-x is a beginner-friendly SLR with most of the must-haves (and a good choice for shooting video), but has no rechargeable battery.			
9	Nikon D3000 $470 find.pcworld.com/72053	★★★½ VERY GOOD	• 10.75-megapixel CCD sensor • Video resolution: n/a • LCD screen size: 3.0 inches	**Pros:** Lightweight but solid build; very good sharpness and color accuracy **Cons:** No video mode; viewfinder protrudes only slightly; LCD hard to read in bright light
	▸ As a first digital SLR, the D3000 is suitable for consumers looking for an affordable, reliable, well-constructed camera.			
10	Olympus E-620 $799 find.pcworld.com/72054	★★★½ VERY GOOD	• 12.3-megapixel live MOS sensor • Video resolution: n/a • LCD screen size: 2.7 inches	**Pros:** Tilt-and-swivel LCD; available as a two-lens kit; feature-packed **Cons:** No video mode; iffy white balance performance; lacks a firm handgrip
	▸ With the E-620, you're getting a midrange model at a near-entry-level price. The kit has two lenses, which makes it an even better deal.			

CHART NOTES: Ratings are as of 6/21/11. n/a = Not applicable.

MORE ONLINE Visit find.pcworld.com/72055 to see in-depth reviews, full test results, and detailed specs for all cameras on this chart.

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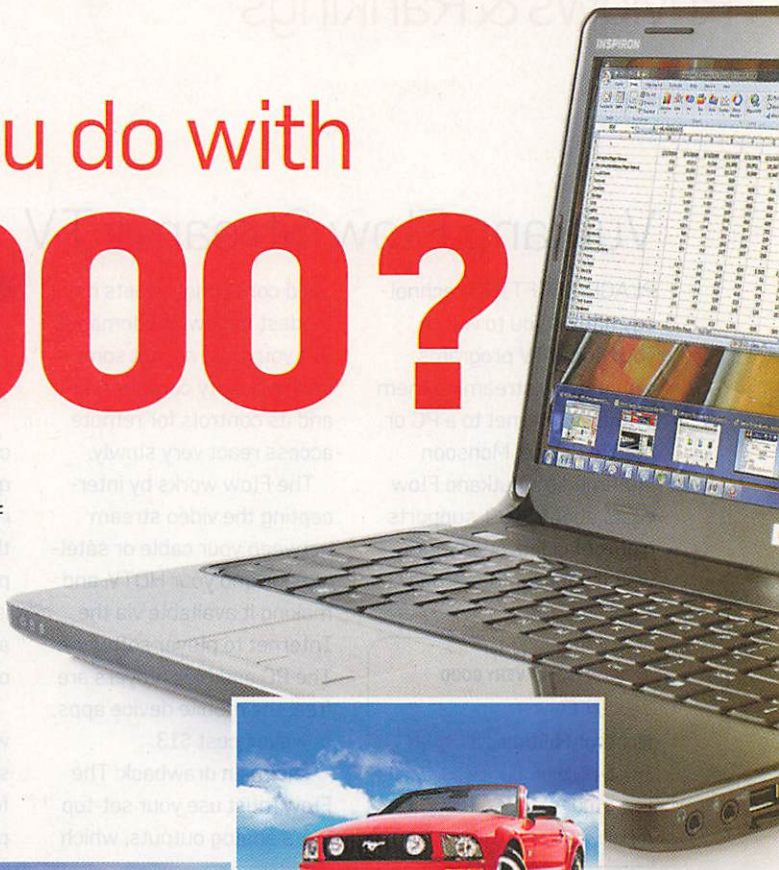

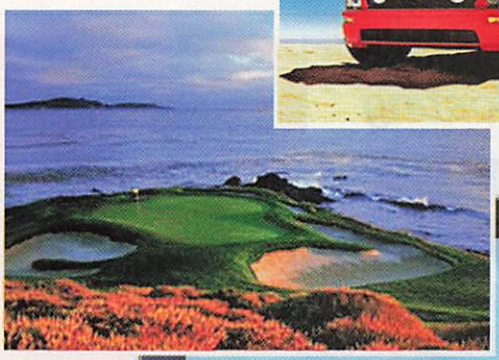

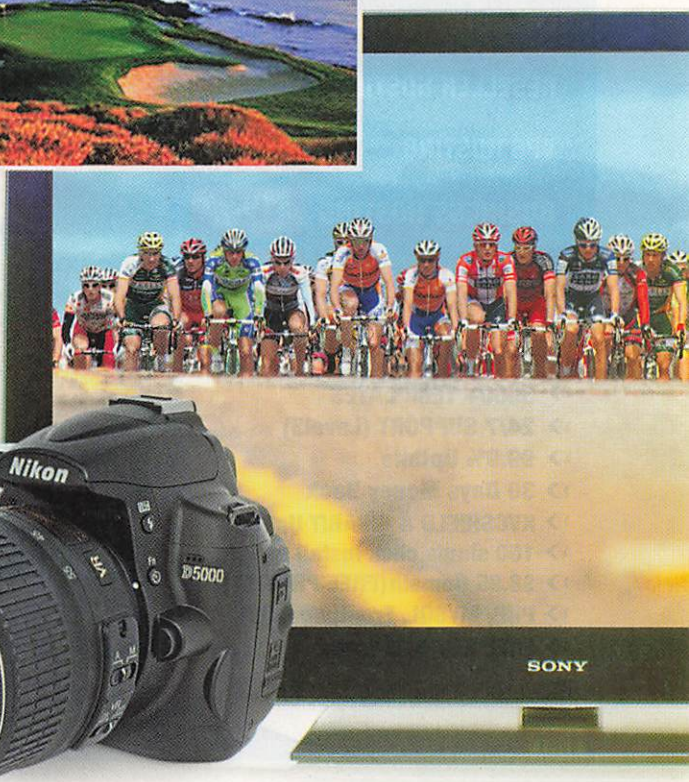

*Enter online**

find.pcworld.com/70973

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Vulkano Flow Streams TV

THE VULKANO FLOW lets you watch TV remotely.

PLACE-SHIFTING technology allows you to watch your home TV programs remotely by streaming them over the Internet to a PC or mobile device. Monsoon Multimedia's Vulkano Flow costs about $100, supports high-def video, and works well if your remote broadband connection meets its modest bandwidth demands. But you must accept some image-quality compromises, and its controls for remote access react very slowly.

The Flow works by intercepting the video stream between your cable or satellite box and your HDTV, and making it available via the Internet to player software. The PC and Mac players are free; the mobile device apps, however, cost $13.

The main drawback: The Flow must use your set-top box's analog outputs, which can't deliver the pristine quality of a digital video signal. The Flow needs to use the box's analog stereo outputs, too. Still, video-quality issues are less apparent on a small mobile screen than on a big HDTV display.

The Vulkano Flow comes with cables to connect to a set-top box's analog outputs for either component or composite video, as well as for stereo audio, but you have to provide your own cables for connecting the Flow to the HDTV. You must also connect the Flow to your home network, preferably by wire.

When I'm on the road, $100 (with no service charges) seems like a bargain for a product that lets me watch pretty good versions of the programs I enjoy at home.

—Yardena Arar

★★★★★ **VERY GOOD**

Vulkano Flow

Monsoon Multimedia

Involved setup, but it works well.

List: $100

find.pcworld.com/72029

HTC Sensation 4G: A Gorgeous Phone, But...

HTC'S SENSATION 4G is, in many ways, a very attractive phone.

THE HTC SENSATION 4G ($200 with a two-year contract from T-Mobile) pretty much has it all: a dual-core Qualcomm Snapdragon processor, the latest version of Android (Gingerbread), and 4G speeds on T-Mobile's HSPA+ network.

When I first played with the Sensation 4G, I was blown away by its beautiful hardware, gorgeous display, and slick user interface. But I did run into troubling issues with its antenna. In some cases, how I held the phone seemed to affect its data-streaming speeds. (One caveat: T-Mobile does not have a very strong 4G signal in the part of San Francisco where *PCWorld*'s offices are located.)

Despite having a 4.3-inch display, the phone doesn't feel oversize. Measuring 4.96 by 2.57 by 0.44 inches, the Sensation 4G is quite thin, as well. And since the display is slightly concave, it won't get scratched if you place the phone face down.

The screen yielded spectacular images: Colors were bright yet not oversaturated, details looked sharp, and animations in the user interface—and native video—played back smoothly. In bright sunlight, however, the display completely fades.

The usual touch-sensitive buttons—Home, Menu, Back, and Search—are below the display. The headphone jack and the power/lock button sit at the top. A long volume rocker occupies the left spine, with a Micro-USB port below it. The phone has no HDMI or MHL port for connecting it to your HDTV.

The Sensation has both a back-facing 8-megapixel camera and a front-facing camera for video chat. Overall, snapshots turned out well, but video quality was disappointing.

Call quality over T-Mobile's network was fairly good. A few people reported that my voice sounded somewhat muffled.

Thanks to its processor, the Sensation 4G handled every app I threw at it perfectly.

We haven't formally tested the phone's battery life, but my review unit went through a full day of heavy use.

—Ginny Mies

★★★★½ **SUPERIOR**

Sensation 4G | HTC

Full-featured phone is appealing but may have antenna issues.

List: $200 (with 2-year contract)

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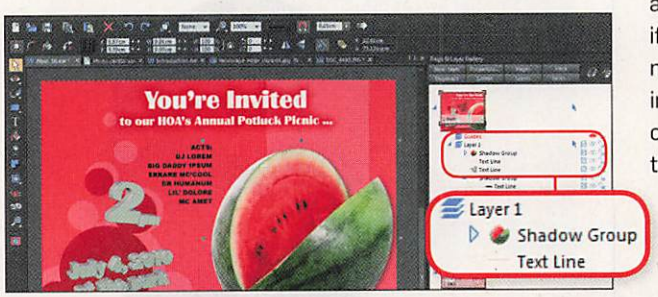
Xara Graphics Tool Is Spot-On for Pros and Novices

XARA PHOTO & Graphic Designer is an all-in-one suite that can edit photos, 2D and 3D graphics, animation, text, and page layouts—for online or print—seamlessly. It hits the mark for both the novice and the power user.

Most features of Adobe InDesign are here, except for support for Pantone and CMYK color separation.



THE TEMPLATES IN Xara Photo & Graphic Designer are a great jumping-off point for someone new to a page-layout program.

Xara's photo-editing tools leave industry standard Adobe Photoshop in the dust. You do have to learn some things; you may find basic commands such as rotate and resize difficult to locate if you're used to looking in menus rather than on Xara's infobar. The software's focus on helping the novice sometimes gets in the way of doing things manually, too.

But the more I use the Xara suite, the more features I discover and the more I love the program, whatever the job at hand.

If you are considering shelling out about $1000 on Adobe Creative Suite Standard or buying pretty much any other comparable design suite, try out Xara's Photo & Graphic Designer first. This is a staggeringly affordable, flexible program.

—Claire Brandt

★★★★½ **SUPERIOR**

Xara Photo & Graphic Designer 7 | Xara

A great, low-cost design choice.

List: $89

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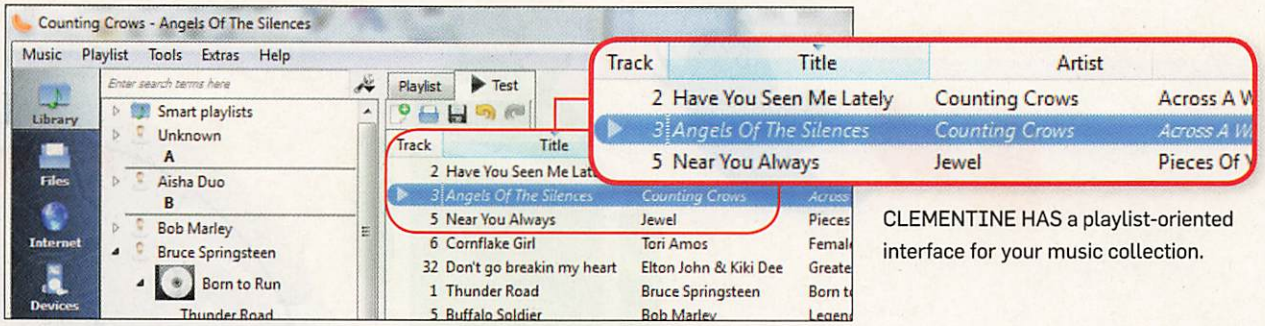

CLEMENTINE HAS a playlist-oriented interface for your music collection.

A Sweet Music Player

DOWNLOAD

MUSIC player Clementine delivers speedy performance in an easy-to-use interface. Although this free download doesn't play video, and it forgoes a built-in music store, it offers a complete range of tools to help you get the most out of your tunes.

Clementine indexed my midsize music collection in just a few minutes, letting me access the playlist-centric interface quickly. Clementine's playlist handling is excellent: You can create smart playlists, and easily build new playlists on the fly.

Clicking *Song info* calls up play statistics, details from Last.fm's wiki, and lyrics from LyricWiki (lyrics.wikia.com). Clicking *Artist info* brings up images, artist tags, and a list of similar artists.

Clementine can manage music on portable players, too, including iPods and iPhones. In addition, you can access Internet music from Last.fm, SomaFM, Magnatune, and other sites.

—Liane Cassavoy

★★★★☆ **VERY GOOD**

Clementine

Thoughtful app organizes and plays back your music files.

Free

find.pcworld.com/72058

MS 400
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Caleb Dennison – Digital Trends
PS 210
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HOW T
EVERYT

FIX | PLAY | USE | DITCH | MAKE | GET

63 Solve various PC headaches

70 Enhance your gaming prowess

73 Bring out your tech gear's best

79 Block nuisance ads; remove crapware

83 Create it—from apps to viral videos

93 Find privacy—or a new job

Boost your Wi-Fi signal, cook s'mores in your PC, wipe an old hard drive, or play Minesweeper like a pro. **Learn these tricks and more in our 31-page tip-a-palooza. »**

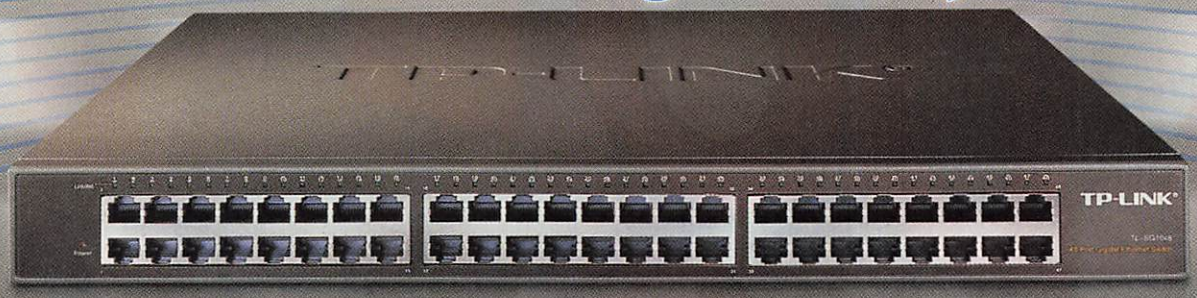
ILLUSTRATIONS BY I LOVE DUST

TP-LINK®

The Reliable Choice

Expand Your Network

with Cost Effective Plug and Play Switches



48-Port Gigabit Rackmount Switch

TL-SG1048

- *48 10/100/1000Mbps RJ45 ports*
- *Supports MAC address self-learning and auto MDI/MDIX*
- *Standard 19-inch rack-mountable steel case*

24-Port Gigabit Switch

TL-SG1024D

- *24 10/100/1000Mbps ports*
- *Innovative energy-efficient technology saves power up to 20%*
- *Supports MAC address self-learning, Auto MDI/MDIX and Auto negotiation*
- *Plug & play design*

24-Port Gigabit Rackmount Switch

TL-SG1024

- *24 10/100/1000Mbps RJ45 ports*
- *Innovative energy-efficient technology saves power up to 40%*
- *Supports MAC address self-learning and auto MDI/MDIX*
- *Standard 19-inch rack-mountable steel case*

16-Port Gigabit Switch

TL-SG1016D

- *16 10/100/1000Mbps ports*
- *Innovative energy-efficient technology saves power up to 40%*
- *Supports MAC address self-learning, Auto MDI/MDIX and Auto negotiation*
- *Plug & play design*

16-Port Gigabit Rackmount Switch

TL-SG1016

- *16 10/100/1000Mbps RJ45 ports*
- *Innovative energy-efficient technology saves power up to 40%*
- *Supports MAC address self-learning and auto MDI/MDIX*
- *Standard 19-inch rack-mountable steel case*

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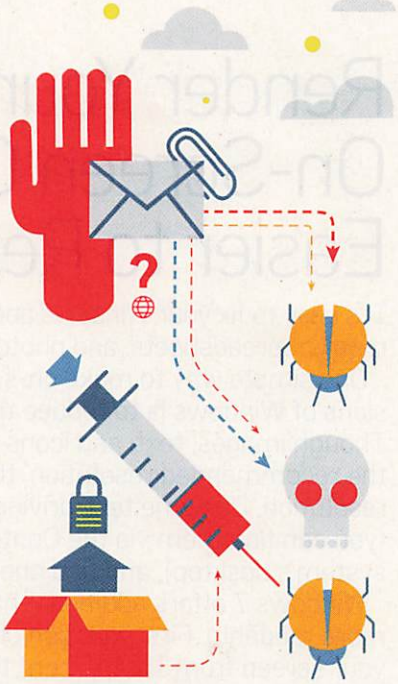
KEEP YOUR PC FROM BEING HACKED

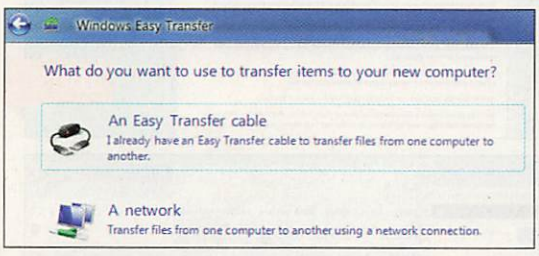


- **Ensure that your software is up-to-date:** Install Windows Updates as soon as possible, and keep your third-party software current, too. Most major commercial software products have automatic-updating options.
- **Distrust unexpected email attachments:** Remain wary even if they come from someone you know. Also, beware of shortened URLs on social networks. Cybercriminals hide links to malicious websites or downloads behind shortened URLs, and they may route poisoned links through messages from people you know and otherwise trust.
- **Install a link-checker plug-in:** AVG (linkscanner.avg.com), McAfee (siteadvisor.com), and Norton (find.pcworld.com/71951) provide free tools that can identify malicious links in search results and when you're browsing the Web.
- **Upgrade to the latest antivirus software:** Malware evolves quickly, and an antivirus product from a few years ago may not block the latest threats effectively. So if you haven't upgraded your antivirus software in a while, do it now.

—Nick Mediati

Migrate to a Win 7 PC

Your first step toward fixing up your new PC digs involves making hidden files and folders visible on your old PC. Open Windows Explorer, and navigate to Folder Options: In XP, select *Tools•Folder Options*. In Vista, choose *Organize•Folder and search options*. Once you're there, click the *View* tab, and then select *Show hidden files and folders*.


Windows Easy Transfer
What do you want to use to transfer items to your new computer?
An Easy Transfer cable
I already have an Easy Transfer cable to transfer files from one computer to another.
A network
Transfer files from one computer to another using a network connection.

On the Windows 7 PC, click the *Start* icon, and type Easy Transfer in the search box. The app will offer you three options. Select *Network* if both PCs are on a shared network, *Easy Transfer cable* if you own the proprietary cable, or *External hard disk* if you have a spare drive that's large enough.

The app will scan your old PC for files to transfer, and then prompt you to 'Choose what to transfer'. It will miss most of your app data, so click *Customize* next to each user and add the Application Data folders.

—Nate Ralph

CLEAN A TV, PC, OR KEYBOARD

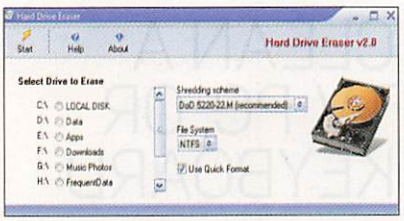
TV: Unplug the TV, and wipe the screen gently with a clean, dry, soft cloth. If a dry cloth doesn't work, dampen it. Avoid glass-cleaning solutions like Windex and anything containing alcohol. Distilled water is the safest liquid to use. If it isn't strong enough, mix in a very small amount of white vinegar. Apply the liquid to the cloth, not to the screen. Wipe the border, sides, and back, and don't let vents get clogged.

PC: Unplug everything, and open the case. Remove large clumps of dust or hair by hand; then use short blasts of compressed air (from the inside out) to blow dust and debris off fans, wires, and other components. You can then wipe surfaces with a moist, clean cloth—but don't get anything noticeably wet, and give it plenty of time to dry before plugging it in.

Keyboard: Turn off the PC and use a can of compressed air to blast dust and debris from beneath the keys. Use a cloth moistened with a mild cleaning solution, such as an alcohol-and-water mix, to wipe surfaces. If the keyboard is filthy, gently pry the keys off, clean them, and snap them back in place—but don't try this on a laptop keyboard.

—Jason Cross »

ILLUSTRATION: I LOVE DUST



WIPE YOUR HARD DRIVE

Wiping the data from your hard drive isn't complicated or expensive, but it involves more than simply deleting files and emptying the trash. Those steps remove the record of your file, but the sectors full of data remain where they were. No operating system wants to make you wait the multiple hours that a true wipe requires.

1 For most people, effectively wiping data involves firing up a free utility such as **Darik's Boot and Nuke** (find.pcworld.com/72030) or **Hard Drive Eraser** (find.pcworld.com/72031). DBAN, which works via a boot disc or floppy, securely wipes every drive attached to the PC. Hard Drive Eraser runs under Windows and lets you selectively wipe individual partitions and drives. Both use the National Industrial Security Program's DoD 5220-220-M "data sanitization" protocol.

2 Another method the armed forces employ is the degausser—a tool that produces a strong magnetic field to scramble everything in its vicinity. Usually, degaussers aren't free to use.

3 If you don't want to reuse the drive, you can resort to a hammer to make data irretrievable. A hammer works best on glass platters; aluminum platters are somewhat harder to destroy. If you choose the path of repeated blows with a blunt instrument, though, be sure to recycle the smashed bits. *—Jon L. Jacobi*

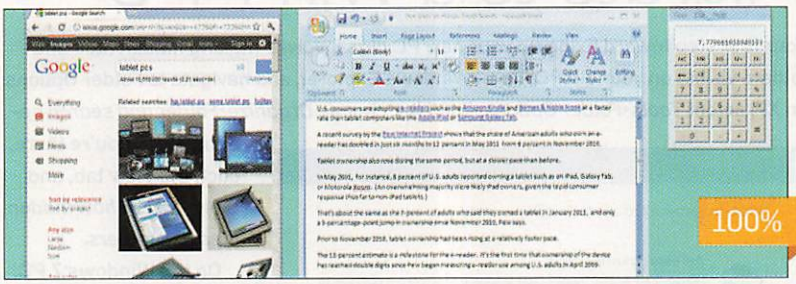
Render Your PC's On-Screen Content Easier to Read

It's easy to fix your Windows and monitor settings to make documents, spreadsheets, and photo-editing programs more readable.

One simple way to make on-screen content larger in all versions of Windows is to reduce the monitor's **resolution** slightly. Though images, text, and icons on the display will be sharper at the recommended resolution, they'll be larger at a slightly lower resolution. Do some test-driving with the available resolutions (you can find them via the Control Panel or by right-clicking your system's desktop), and find one that suits your needs.

Windows 7 offers additional handy options to make your display more readable. First, you can change the size of everything on your screen from 100 percent to 125 percent or 150 percent by adjusting one of your **display settings**. Right-click your screen, choose *Personalization•Display*, and then go big, bigger, or biggest. Windows 7 also lets you easily establish a custom size for your text in these settings, and you can turn on the ClearType Text Tuner to make text on LCDs sharper.

Another feature that promotes easy reading in Windows 7 is the **Magnifier tool** (you can reach it through a link in the text describing the Display options under 'Personalization'). Though having this tool on all the time can be somewhat annoying, the Magnifier is useful when you just need to see one thing a little larger. You may want to rely on it occasionally instead of enlarging all of your text or your entire screen. *—Anne B. McDonald*



PARTITION YOUR HARD DRIVE INTO VOLUMES

DISK PARTITIONING CAN fix many PC-related headaches, and Windows 7's Disk Management tool does the job for free.

1 Back up your data. The partitioning process shouldn't delete any data, but why take chances?

2 Select *Control Panel• Administrative Tools• Computer Management* to open the Disk Management tool. Beneath the 'Storage' heading on the left-hand side, click *Disk Management*. You should see a list of your existing drives and partitions (if applicable). To create a new partition, choose a disk that has free storage space, right-click it, and select *Shrink Volume*. You can safely shrink only basic disks; if you try to shrink dynamic disks (such as RAID arrays) formatted with the NTFS file system, you may lose data.

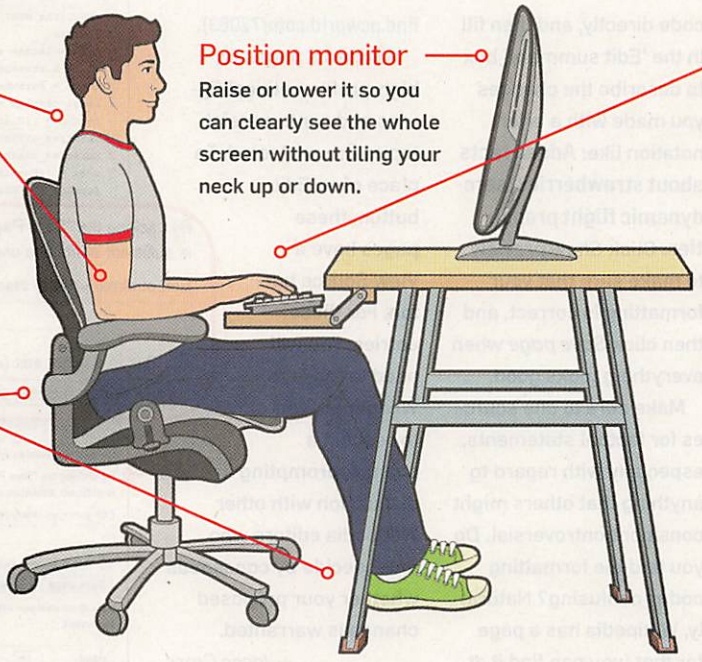
3 In the available field, enter the amount of space you want to shrink the disk by, based on what you wish to use the other partition for. If you plan to dual-boot another version of Windows, for example, you'll want a lot of space (Windows 7 requires at least 16GB of room); but if you're creating an emergency recovery partition, you'll need far less space. If you'll be installing an operating system in this partition, your OS installer will likely insist on creating the partition itself during the installation process.

4 Once you have cleared the necessary space, it should show up in the Disk Management window as 'Unallocated Space'. Right-click this entry, select *New Simple Volume*, and let the resulting wizard guide you through the remaining steps of the process. In all probability, you will want to format the new partition as NTFS; and unless you're using the partition for archiving, you won't need to enable file and folder compression for the whole drive.

Now you have a squeaky-clean hard-drive partition that you can use to dual-boot Windows 7 or to keep your data safe. *—Nate Ralph*

Set Up an Ergonomic Workspace

These tips come courtesy of Steve Meagher, from ergonomics consulting firm Site Solutions.



Maintain good posture

Keep your back straight—remember, no slouching!—with your head balanced above your neck, and arms resting at your sides comfortably.

Position monitor

Raise or lower it so you can clearly see the whole screen without tiling your neck up or down.

Place keyboard and mouse

Keep them close to each other on the same level, with the home row of keys easy to reach with your elbows positioned at 90°. As you type, your wrists should be straight.

Adjust seat

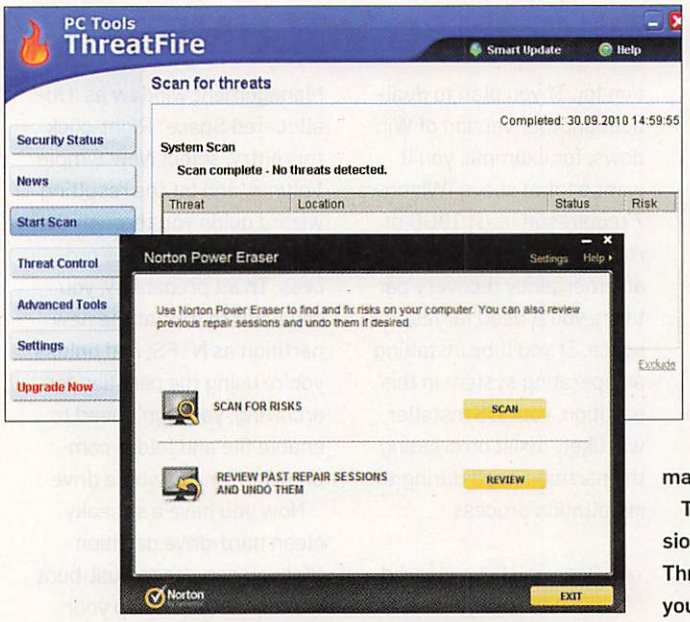
Position your hips a bit higher than your knees, with your feet on the floor/footrest and your lower back supported.

Rest regularly

Every 20 minutes or so, take short, 15- to 30-second breaks. Take a few longer breaks during the day.

—Jason Cross »

ILLUSTRATION: BROWN BIRD DESIGN



Defend Your PC Against Attacks

An infected PC may be sluggish or crash-prone. The malware plaguing it may flood your screen with pop-ups, even if your browser isn't running. If you navigate to one website, the rogue app might redirect you to another. And malware may prevent you from updating your security software.

Microsoft has put together a three-step guide (available at find.pcworld.com/71949) to removing malware. If your system has a stubborn infection, try Norton Power Eraser (free; find.pcworld.com/71950): It can identify and remove malware that regular malware scans might miss.

To prevent future infections, upgrading to the most recent version of your antivirus software is a sensible precaution. PCTools Threatfire (free; threatfire.com) is worth downloading, too: It gives your system an extra layer of protection. *—Nick Mediati*

Change an Entry in Wikipedia

Have you ever looked up something in Wikipedia and encountered some supposed "facts" that you know are incorrect or in dispute? Or maybe you have some additional useful details about the physical properties of strawberries, say, that the current "Strawberry" entry lacks. Editing Wikipedia is easy—you don't even have to register!

On most Wikipedia pages, next to the search box in the upper right, are three buttons: Read, Edit, and History. Click *Edit* to see all of the code for the current entry. Edit the code directly, and then fill in the 'Edit summary' box to describe the changes you made with a brief notation like: **Added facts about strawberries' aerodynamic flight properties.** Click *Show preview* to make sure that your formatting is correct, and then click *Save page* when everything looks good.

Make sure to cite sources for factual statements, especially with regard to anything that others might consider controversial. Do you find the formatting codes confusing? Naturally, Wikipedia has a page for that (you can find it at find.pcworld.com/72063).

Wikipedia pages for high-profile political figures and controversial topics are protected. In place of an Edit button, these pages have a View Source button. For these entries, you will need to log in to Wikipedia even to request a change, prompting a discussion with other Wikipedia editors who must decide by consensus whether your proposed change is warranted. *—Jason Cross*

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Discussion
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Editing Garden strawberry
From Wikipedia, the free encyclopedia
Advanced
Special characters
Help
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By clicking the "Save Page" button, you agree to the Terms of Use, and you
is sufficient attribution under the Creative Commons license.
Edit summary (Briefly describe the changes you have made)
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Watch this page
Save page
Show preview
Show changes
Cancel | Editing help (
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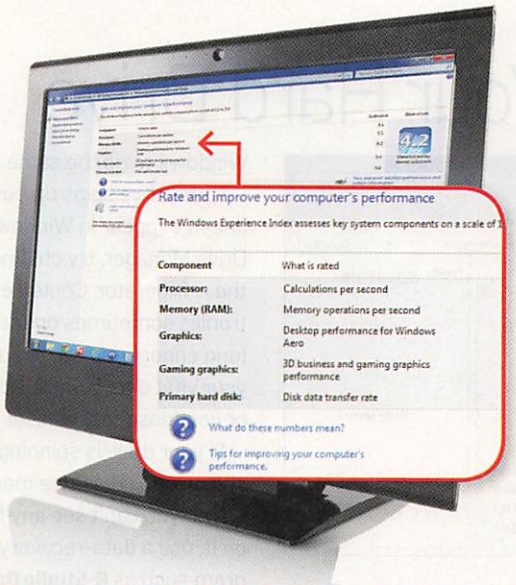
Sign your


Rate and improve your computer's performance
The Windows Experience Index assesses key system components on a scale of 1
Component
What is rated
Processor:
Calculations per second
Memory (RAM):
Memory operations per second
Graphics:
Desktop performance for Windows Aero
Gaming graphics:
3D business and gaming graphics performance
Primary hard disk:
Disk data transfer rate
What do these numbers mean?
Tips for improving your computer's performance

BENCHMARK YOUR PC

Running free or low-cost benchmark applications on your PC is a great way to see what it can handle—and where a hardware fix or upgrade might do the most good.

Futuremark offers several excellent benchmarks. Both **3DMark Vantage** (find.pcworld.com/72032) and the recently released **3DMark 11** (find.pcworld.com/72033) appeal mainly to gamers, with tests designed to measure how well your PC renders intricately lit 3D models and scenes, and churns through complex physics calculations. Vantage targets older DirectX 10–based hardware, while 3DMark 11 features all-new tests that run only on DirectX 11 graphics.

Futuremark is also responsible for **PCMark** (find.pcworld.com/72034), a relatively general-purpose benchmark that pays attention to just about every component on a PC. You'll find tests that measure how well your system transcodes video, how well it imports photos and music, and how well it handles basic image editing and text entry.

The 3DMark and PCMark apps are available for free, though many of their testing options are locked behind a paywall. By spending $20 you can unlock quite a bit of functionality, but if you simply want an idea of what your machine can do, the basic trial versions are good enough.

If you use Windows 7 (or Vista), head to the Windows Control Panel, and select *System*. You'll see a light-blue box with a number representing your **Windows Experience Index**. Windows calculates this score by assessing your hardware and assigning each component a subscore. The final Windows Experience Index score is the lowest score on your list, highlighting exactly what you should consider upgrading. The Windows Experience Index isn't an exact science, but it may be the easiest way for Vista and Windows 7 users to see how their PC stacks up. *—Nate Ralph*

PHOTOGRAPH: ROBERT CARDIN

TROUBLESHOOT FOR YOUR ENTIRE FAMILY

The curse of being even a little bit tech-savvy in a largely tech-clueless world is that you almost automatically find yourself elected Tech Support for your family members, friends, and sometimes even coworkers. Presumably you care about (or at least, tolerate) these people, so try to wear your Computer Troubleshooter badge with honor—and follow these tips to fix common problems as quickly and painlessly as possible.

1 You're not Superman: When it comes to troubleshooting other people's PCs, follow the physician's credo, "First, do no harm." Before you start deleting drivers, installing utilities, or replacing power supplies, ask yourself whether the problem is one that you can solve. It's great to be a hero, but you need to know your limits—and recognize when it's time to call in professional help.

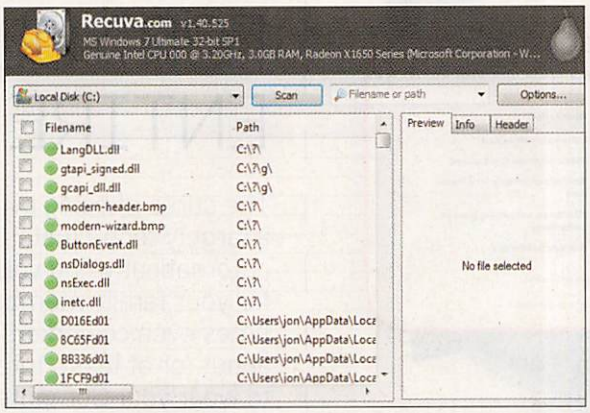
2 Take (remote) control of the ailing PC: As long as the troubled system's Internet connection is working, remote-control software lets you take control of the PC, interacting with it as if you were sitting in front of it. It's a lifesaver and a sanity saver—and many remote-control tools are free.

3 Don't forget the flash drive: Prepare a flash drive equipped with file-recovery utilities, malware-fighting software, system-diagnostic programs, and other portable apps that can run directly from the drive. It's like a multitool for PCs, consisting of all the applications you like best.

4 Share your resources: What's the best defense against technology problems of all kinds? Education, of course. So when you come across particularly helpful articles or how-to guides, share them with your family, friends, and colleagues. The more they know, the better prepared they'll be when trouble strikes—and the less likely they'll be to interrupt you during dinner with desperate pleas for help. *—Rick Broida* »

Recover Data From Your Hard Drive

If your drive is clicking loudly or won't spin up, you may need to call in a recovery service. They're expensive; but if the data is crucial, you have no choice. If the loss isn't traumatic, you can simply ditch the drive and re-create the data. Otherwise, prepare to pay. But before pulling out your wallet, give these less-costly fixes a try.



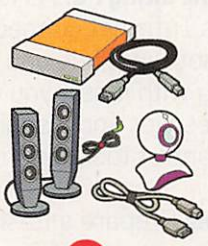
If the drive seems healthy but you can't boot into Windows, boot with a utility disc such as **Parted Magic** (find.pcworld.com/72035). If you can see the files in PM's file manager, copy the files that you need to another drive. Never copy to the same drive, because doing so might overwrite other data in the process. Alternatively, attach the drive to a working PC and use Windows to do the same thing.

If the drive spins up but doesn't appear in Windows Drive Manager, try chilling it in the refrigerator. Cooled electronics sometimes operate long enough for you to copy your vital data from it. No frost or condensation, please!

If your drive is spinning and shows up in the drive manager, but you can't see any files on it, use a data-recovery program such as **R-Studio Data Recovery**, **Active File Recovery**, or Piriform's free **Recuva** (find.pcworld.com/71650). Perform your recovery under Windows if you can; or use a boot disc, if the vendor supplied one.

If a quick file scan doesn't work, use the slower sector-by-sector scan. Copy all of the files you need. *—Jon L. Jacobi*

MANAGE CORDS FOR YOUR GADGETS



1

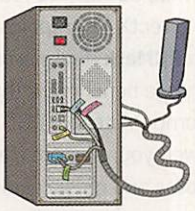
Unravel the Mess

Start fixing your cable disaster area by completely powering down everything and then disconnecting all of the cables at each end. Slowly remove each cable, untangling as you go, and lay each cable out neatly next to the device to which it belongs.

2

Label the Cables

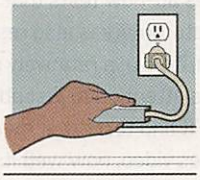
Attach a label to each cord or cable describing the device or peripheral it connects to. Legibility is essential—use a label maker if you can—and color-coding isn't a bad idea. To save money, you can write labels on pieces of paper and attach them with clear tape. Make sure that the labels are easy to read and won't get snagged on other objects.



3

Reconnect the Cables

Take your freshly labeled cables and reconnect everything, keeping the cables tidy by tying them together. Many cable-management products help make this step easy and produce attractive results. For people who don't want to spend the money on special bundling products, simple zip ties offer a time-tested, cost-effective alternative.



4

Apply Finishing Touches

To conclude your project and give your office, game room, or home entertainment setup maximum visual appeal, you can use products designed to hide your newly organized cables along baseboards, the edge of your desk, and so on.

—Jason Cross »

ILLUSTRATION: BROWN BIRD DESIGN

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Stay Ahead in StarCraft II

StarCraft II is a monstrously difficult strategy game that requires hand-eye coordination, speed, a chess master's brain, hours upon hours of practice, and, of course, the competitive drive to win. How can you immediately improve your game? My advice: Focus on your macro-management.

Before you learn how to use your units, you must *make* your units—and if you have more units than your opponent, you'll have an easier time playing and winning. So don't worry about advanced strategies and tactics until you've mastered these principles:

1. Never stop producing your worker units (Terran SCVs, Zerg drones, Protoss probes).
2. Don't let yourself get supply-blocked. Build your Supply Depots/Overlords/Pylons before you need them, so you don't slow down your army production.
3. Try to keep your money supply below 1000 minerals. Leaving money sitting around in the bank doesn't help you win.
4. Use your race's macro abilities. If you are Terran, be sure to drop MULEs as often as you can. If you are Zerg, remember to inject larvae on each hatchery as soon as your Queens can. If you are Protoss, always use your Chrono Boost, be it on your Nexus, upgrades, or unit-producing structures.

—Geoff "iNcontroL" Robinson, Team Evil Geniuses (www.myeg.net)

PRETEND TO BE A HOLLYWOOD HACKER

Nobody makes computers seem cooler than Hollywood's chain-smoking, coffee-slamming cyberpunks, especially while they're dismantling armies, tracking serial killers, and editing Wikipedia articles all at the same time. Here are some tips for looking like you belong in front of a camera instead of behind a desk.

HackerTyper (www.hackertyper.net) is an adorably silly Web app that transforms you into a coding genius (or at least lets you play one). Click the 'Hack!' button and mash on your keyboard, and HackerTyper will spit out a bunch of preset code from one of four included sources or your own uploaded file. Keep it open while the boss walks by, and you might just land a promotion.

Next, stop by guivbip.codeplex.com and look for Hacker_wez's "**GUI interface using Visual Basic to track an IP Address**" app. See, hackers on TV always need to pull up some special app to track criminals (though you'd think they could just use the command line). Plug in an IP address and watch your fancy app ping it, complete with assorted screenshots from *CSI: NY* to track your progress.

No good hacker goes without some kind of surveillance equipment. Fortunately, all you need for this one is Google. Lots of security cameras these days include features that let you monitor them over the Internet—and some of those cameras aren't properly secured. Googling certain terms can lead you straight to unsecured camera feeds: Try **intitle:"EvoCam" inurl:"webcam.html"**, **intitle:"WJ-NT104 Main Page"**, and **inurl:axis-cgi/jpg**, for starters. *—Patrick Miller*

ENJOY PC CLASSICS

Looking to play an old game on your modern computer? You need DOSBox (find.pcworld.com/71998), an open-source emulator.

Install it, and then create a folder to store your games. Name the folder something simple like **C:\OLDGAMES**. Boot up DOSBox and type **Z:\>MOUNT C C:\OLDGAMES** to tell it to emulate a virtual DOS machine and treat your C:\OLDGAMES folder as the C:\ drive.

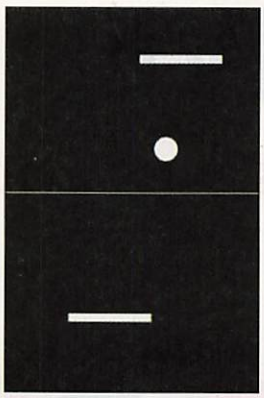
Type **Z:\>C:** to get a C:\> prompt. Use the "CD" (change directory) command to switch to a game's folder, and then type the executable's name to run the game.

—Alex Wawro

FIND FAVORITE RETRO GAMES FOR ANDROID

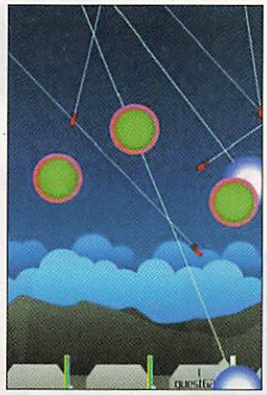
Space Invaders

This version (find.pcworld.com/71992) is true to its roots. You are a lone tank defending against an endless armada of invading aliens. Now you can blast them away just as you used to—and still have enough quarters for doing the laundry.



Classic Pong

Classic Pong (find.pcworld.com/71993) offers the action everyone remembers, but with extra options. You can adjust the ball and paddle size, and how fast the game moves. It's great for your more nostalgic moments.



Missile Defense

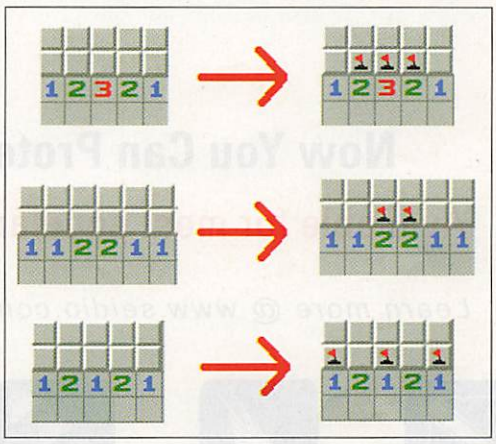
A basically faithful adaptation of the arcade hit Missile Command, this title (find.pcworld.com/71995) lets you team up with other players. Such collaboration is especially helpful later in the game, when missiles fill the entire screen.

Pac-Man

In this version of Pac-Man (find.pcworld.com/71994), the rules are the same: Gobble up pellets and outrun ghosts. Playing with a touchscreen may not be as easy as using a joystick, but it's still fun.

—Armando Rodriguez

Beat Minesweeper



1 Optimize your setup: Everyone knows how to play Minesweeper, but not everyone knows how to play it well. Start with a good mouse and mousepad. Your mouse must provide control and accuracy. I use an old Logitech MX518 set to 800 dpi (in the Logitech control panel), with sensitivity set to the third position in the Mouse control panel and mouse acceleration turned off. Make sure your desk doesn't shake. When you're ready, download a competitive Minesweeper program such as Minesweeper X (find.pcworld.com/71996); it prevents cheating, counts exact times, and records replays. Keep your hands warm, but if your hand starts to sweat while you're playing, wash it (I wash mine every 10 to 20 minutes). You can't click accurately if you're perspiring.

2 Learn the patterns: Play Minesweeper long enough, and you'll learn where the mines are just by looking at the pattern of numbers. You'll see the combinations shown here often.

3 Use flags wisely: If you play using flags, try the "double-click" (press the left and right mouse buttons at the same time). This action opens all of the squares surrounding a square with a number, if you have flagged the mines around that number.

4 Join the club: Stop by Authoritative Minesweeper (www.minesweeper.info), the online home of the Minesweeper community. You can find information about world records, a Minesweeper wiki, live tournaments, and plenty of tips. To join the World Ranking, your time records on the Beginner, Intermediate, and Expert difficulties must add up to less than 100 seconds.

—Kamil Murański, Minesweeper world-record holder (find.pcworld.com/71997) »

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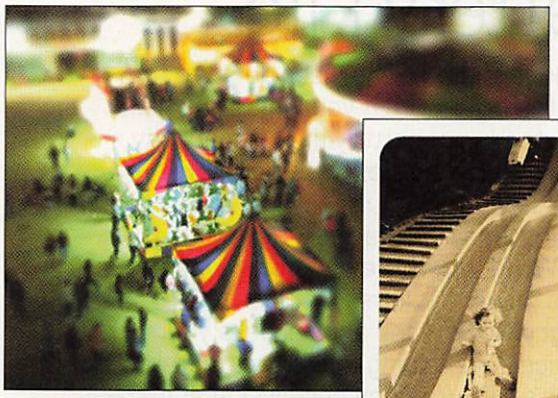
Take Great Photos With a Phone

1 Keep the phone steady: Hold the camera phone motionless, with both hands, and keep your elbows tucked into the sides of your body for support. Take a deep breath, then let out a slow, steady exhale as you gently trigger the phone's shutter release.



2 Know when the shutter clicks: If there's a lag, you'll need to account for that. If the shutter release is on an iPhone or other touchscreen phone, the shutter probably gets tripped after you lift your finger, not when you press down. Hold the camera steady while the pic is being exposed. And don't jab at the screen, or the shake will blur your photo.

3 Optimize your settings: If there's an ISO setting, take it off Auto. When you're outdoors in daylight, set the ISO to its lowest value to minimize digital noise in your picture. In low-light situations, bump the ISO up as high as it'll go.

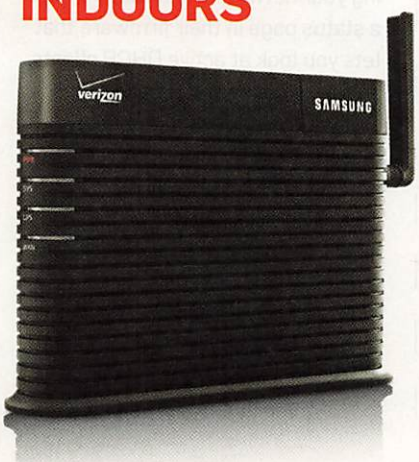
4 Use the flash to reveal daytime details: It may seem counterintuitive, but in daylight, a fill flash can be your secret weapon. It provides a burst to reduce the dark shadows caused by bright sunlight. And if you're close enough to your subject, it can provide pleasant, even lighting on your subject's face.

5 Don't use digital zoom: Your camera phone can't magnify the image by moving its lens. Instead, it must use a digital zoom, which just makes the pixels big and blocky, obliterating fine detail. Want to fill the frame? Walk closer to your subject. If you really need to zoom, you can always use an image editor to produce the same effect on your PC later.

6 Enhance your photos with apps: For the iPhone, we like Photo fx ($3), a slick collection of filters and effects; Tiltshift ($3), which turns photos into faux miniatures; and Photosynth (free), for panoramic shots. For Android phones, try the effects-filled Vignette ($4); Camera 360 ($4), with loads of pro photography capabilities; and Retro Camera (free), for creating old-timey-looking shots.

—Dave Johnson and Zack Stern

IMPROVE CELL RECEPTION INDOORS



TIRED OF HAVING TO WALK OUTSIDE TO GET A DECENT SIGNAL WHEN YOU WANT TO USE YOUR CELL PHONE? Consider investing in a femtocell (left), a device that essentially creates a miniature cell tower in your home, transferring voice calls and data at 3G speeds to and from your carrier's network through your broadband Internet service. Available from AT&T, Sprint, and Verizon Wireless, femtocells connect conveniently to your home network via an ethernet port on your router.

You'll need to place your femtocell—or a separate antenna for it—near a window, so it can signal its location to your carrier via GPS. Carriers charge $125 to $250 for a femtocell, but you won't have any monthly fee for using it with calls and data services on your existing phone plan. You can also sign up for an optional unlimited calling plan for calls made using the femtocell—an alternative to voice-over-IP services such as Vonage's.

Alternatively, you can pay $250 to $400 or more for a repeater or signal booster, which amplifies cell-tower signals. You'll need to buy one that supports your carrier's frequencies. Though pricey, the best repeaters provide better coverage than femtocells. Third parties that specialize in repeaters include Wilson Electronics and Wi-Ex's ZBoost line. *—Yardena Arar* »

Extend Your Cell Phone's Battery Life

1. **Dim the screen:** Turn your screen's brightness down to the lowest setting that you can tolerate. Even if you ignore the next five tips, try this one; it will extend your battery life dramatically.
2. **Set screen timeouts to kick in as quickly as possible:** To adjust how long your screen stays lit after receiving input, change the appropriate entry in your phone's display settings menu.
3. **Turn off Bluetooth and Wi-Fi when they're not in use:** Both of those features are serious power suckers.
4. **Go easy on power-hungry GPS:** Many apps access your phone's GPS to provide services like finding nearby restaurants. Revoke access to your phone's GPS (or deny permission at installation time) for all apps except ones that wouldn't be worthwhile without it. Kill extraneous apps and nonessential app notifications.
5. **Don't use vibrate:** All that rockin' and rollin' takes lots of juice.
6. **Buy an extended battery:** It will swell your phone's waifish profile, but it could also double the time between charges. Search online for "extended battery" for your make of phone. *—Robert Strohmeyer*

STREAM MEDIA FROM ANYWHERE TO YOUR HDTV

DLNA is a technology standard created precisely to support and simplify media streaming between devices on a network. If your HDTV doesn't already support DLNA, you'll need to hook up one of the many networkable set-top boxes that do, such as Netgear's NeoTV (find.pcworld.com/71952), one of Western Digital's WDTV Live streamers (wdtvlive.com), or even a PlayStation 3. With a set-top box in place, you'll be able to stream media from a multitude of DLNA-enabled devices, including any Windows 7 computer. Though a couple of the newer smartphones (the LG Optimus, for instance) come with built-in DLNA support, the great majority of smartphones and tablets require a DLNA-enabling application; examples are iMediaShare (for Android and iOS; imediashare.tv) and Skifta (for Android; skifta.com).

Many set-top boxes and HDTVs let you stream from Netflix, Pandora, YouTube, and other sites and services, but DLNA lets you use your HDTV to play music and watch videos and photos stored on locally networked devices. It supports common file formats but doesn't let you play or watch copy-protected content. *—Yardena Arar*

Improve Wi-Fi in Your House

If you're having difficulties with your Wi-Fi range, start with your router's positioning. Keep the router away from potential sources of interference, such as microwave ovens and some cordless phones. Your neighbor's Wi-Fi network could be causing problems, too. See find.pcworld.com/71972 for more ways to deal with Wi-Fi interference issues.

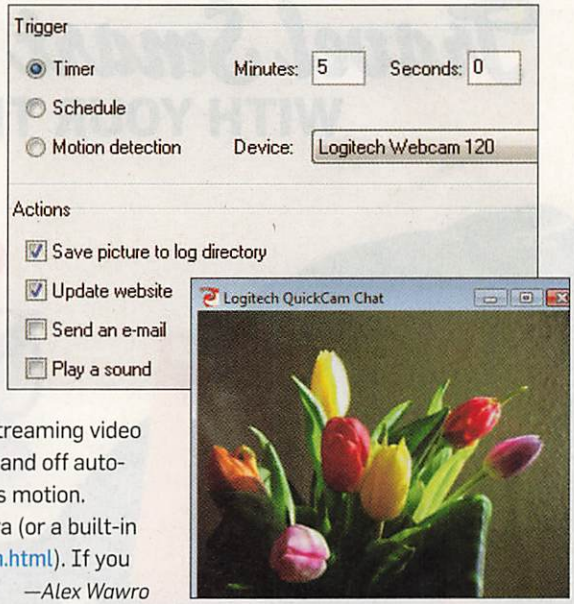
See if any unauthorized gear is using your network. Most routers have a status page in their firmware that lets you look at active DHCP clients, so take a peek from time to time.

If your Wi-Fi reception is okay up close but iffy a room or two away, boosting the signal may help. Various companies sell add-ons to boost signal strength. Or experiment with a home-brew antenna (one we saw at FreeAntennas.com uses foil). See find.pcworld.com/71971 for additional details and product suggestions.

—Yardena Arar and Jeff Bertolucci

ILLUSTRATION: I LOVE DUST

TURN A WEBCAM INTO A SECURITY CAMERA



Repurposing an old webcam as a spare security camera to keep an eye on your home while you're not around is easy. First update your webcam with the latest drivers. Then get some appropriate software.

For PC users, we recommend **TinCam** ($19; tincam.com), a simple piece of monitoring software that can remotely record video and still images from your webcam. Download the 30-day free trial, make sure your webcam is plugged in, and then boot up TinCam and allow the software to run through the automated setup wizard. Once it detects your webcam, the program will offer you several options, such as setting up multiple remote video streams from different cameras or streaming video to a secure Web page. You can even configure your webcam to switch on and off automatically at regular intervals, just at certain times, or whenever it detects motion.

Mac OS X users who have a Facetime- or QuickTime-compatible camera (or a built-in webcam) can try EvoCam ($30, with a 15-day trial; evological.com/evocam.html). If you run Linux, give ZoneMinder (free; zoneminder.com) a try. *—Alex Wawro*

Cut Power Consumption in Your Home or Office

Use less power by adopting practical energy-conserving habits.

1 In Windows 7 or Vista, go to the Control Panel and search for Power Options to reduce the length of time your computer idles before it turns off the display or enters sleep mode.

2 If you'll be away from your home or office for a long time, make sure that your devices are unplugged. Even a cell phone charger, when it's not in use, draws enough power to make a difference on your energy bill. Alternatively, spend a few bucks and pick up a "smart" power strip, which can eliminate "vampire" draw by cutting electricity to devices that aren't being used.

3 Look for Energy Star devices, which are guaranteed to use less energy, when you buy new equipment. The PCWorld Labs recently tested an Energy Star–certified Dell Optiplex 990 desktop that drew an average of 21.6 watts on idle. A similar, noncertified desktop idled at 37.6 watts—a substantial difference. You can search for Energy Star–certified products at energystar.gov.

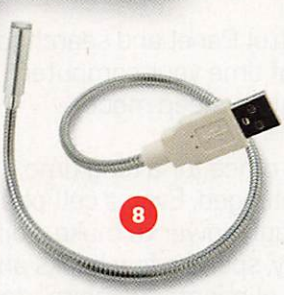
4 Use natural light, rather than artificial overhead lighting, whenever possible. And don't forget the golden rule of energy conservation: Turn off all lights when leaving a room. *—Alex Cocilova*

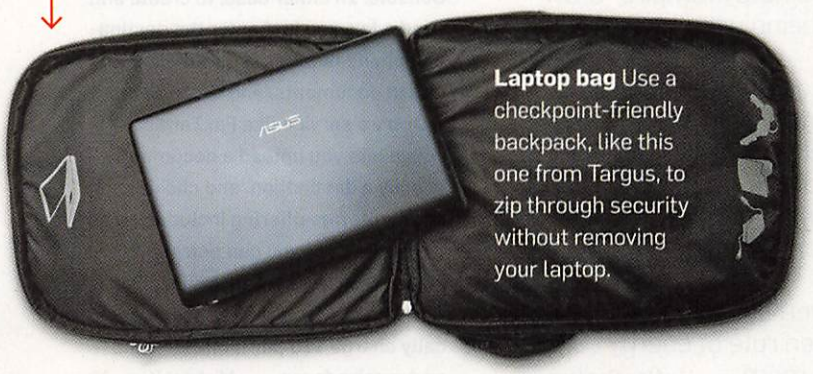
FAX FROM YOUR PC

NO FAX MACHINE? NO WORRIES. If you have a phone line, a fax modem (internal models cost $15; external USB models are $50 or so), and a Windows 7 or Vista system, click *Start•All Programs•Windows Fax and Scan,* and press **Enter** to launch Windows Fax and Scan. In Windows XP, the correct sequence is *Start•All Programs• Accessories•Communications•Fax•Fax Console.* In either case, to create and send a fax, you just enter the destination phone number, type a message, attach documents, and press *Send.*

Or try a service like FaxZero.com, which lets you upload a document, specify a destination, and click *Send.* FaxZero's free offering includes an ad cover sheet, or you can pony up for an ad-free version. Other sites, like Fax.com and GotFreeFax.com, typically charge $10 per month to send and receive faxes. *—Michael King* »

Travel Smart
WITH YOUR TECH





Laptop bag Use a checkpoint-friendly backpack, like this one from Targus, to zip through security without removing your laptop.

1. **Bluetooth headset:** Stay hands-free and wireless on the road.
2. **Portable battery:** i.Sound PowerMax's five USB ports can charge several devices.
3. **Retractable ethernet cable:** When the Wi-Fi is flaky, you'll be happy to have this.
4. **Unlocked phones:** Save costs on talking and Web browsing internationally.
5. **E-reader:** Beats carrying a bag of books.
6. **USB drive:** Keep critical documents on a USB key in case your laptop dies.
7. **Laptop:** Weight and size matter, so keep it as light as possible.
8. **USB light:** Flex Light, made by Manhattan, illuminates your e-reader or laptop.
9. **USB hub:** Turn one USB port into four with this device from 4 Legged Octopus.
10. **Stereo audio cables:** They let you plug your iPod into a rental car like a port.
11. **Microfiber cloth and cleaner:** Because the world is a dusty place.
12. **Portable power strip:** This strip, from Monster Power, also has a USB port.
13. **All-in-one plug adapter:** From iGo, it lets you plug into any outlet in the world.
14. **USB wireless antenna:** This antenna, from Alfa, extends your wireless range.

—Anil Polat

PHOTOGRAPHS: ROBERT CARDIN

View Any Kind of File

Windows 7 and Vista display most file types in a preview pane. Activate it by going to Windows Explorer (click *Start* and type **explorer.exe** in the 'Search programs and files' box) and clicking the icon in the upper right corner.

Unfortunately, if a multimedia file type is not associated with Windows Media Player (WMP), you'll see only an icon of its associated application. No problem. PreviewConfig.exe (find.pcworld.com/72037) will let you preview lesser-known file types. The K-Lite Codec Pack (find.pcworld.com/71958), meanwhile, adds a preview capability for many video and audio files. And the Nitro PDF Reader (find.pcworld.com/71960) handles PDFs.

If all of that preview pane tweaking sounds like a pain (or if you're using XP), consider a stand-alone program to open your oddball files. Start with two free options: VLC (find.pcworld.com/71959) for video and audio files, and GIMP (www.gimp.org) for photographs and graphics. For compressed files, both 7-Zip (find.pcworld.com/71962) and PeaZip (find.pcworld.com/71963) work well (both are free), though nothing beats RARLab's $29 WinRAR (find.pcworld.com/72038).

If you are still working with Microsoft Office 2003 and you want to read newer Office files, install the Microsoft Compatibility Pack (find.pcworld.com/71988). —*Jon L. Jacobi*

CONNECT TO YOUR WORK PC FROM HOME

THESE TIPS CAN help you use your workplace computer without leaving your home. Before you start, however, check with your company's IT department.

Via Windows Remote Desktop: To set up your work PC for remote access, go to *Start•Control Panel•System and Maintenance•System*, and select *Remote Settings* from the left panel. Enable *Remote Desktop* at the bottom, and select the users or groups that are allowed to connect to it.

To connect to your work computer from home, choose *Start•All Programs•Accessories•Remote Desktop Connection*, and then type the name or the IP address of the office system that you want to connect to.

Via VNC: RealVNC (realvnc.com) is an open-source tool that is free for personal use. Install RealVNC on your work PC, configure it to accept incoming connections, and set up authentication to restrict who can connect. Then, on your home PC, install the VNC client software to connect to the work desktop.

Via GoTo My PC: Another alternative is GoToMyPC (gotomypc.com). Since it works with Mac OS X, it may be the way to go if you do cross-platform work.

Via Your Tablet: Various apps for the iPad (find.pcworld.com/71933) and for Android tablets (find.pcworld.com/71934) will let you connect to and work with your desktop PC remotely (see *Simply Business* on page 32). —*Tony Bradley*

USE YOUR SMARTPHONE WITHOUT BEING TRACKED

1 **Manage location tracking:** Many smartphone apps ask for your permission to use your current location information. If you don't want to be tracked, don't approve them. On the iPhone, you can go into *Settings*, and there tap *Location Services*, to review which apps are tracking your location, and to enable or disable tracking. For Android, you'll want to check app permissions when installing new applications. Although some apps will ask you if you want to allow them to use your location, be aware that that is not always the case.

2 **Don't check in:** Avoid using services like Foursquare, Gowalla, Yelp, and Facebook Places that tell the world where you are at a given moment.

3 **Don't geotag your photos:** Many smartphone users don't realize that the photos they take with their phone camera also contain the exact GPS coordinates of where the photos were taken. You can disable this geotagging feature in your phone's settings. On an iPhone, go to *Settings•Location Services* and turn off the setting for *Camera*. On an Android smartphone, open your Camera app, press *Menu*, and go into the Camera settings to alter them. —*Tony Bradley* »

EVERYTHING YOU NEED TO STAY CHARGED

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Power up to 5 USB powered devices at once with the
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REMOVE CRAPWARE FROM YOUR PC

IT'S A UNIVERSAL PROBLEM: You boot up a new computer, and you find that it's already littered with trial versions of software, commonly referred to as "crapware." Although the unwanted software won't harm your computer, it will hog memory and create annoying pop-ups asking you to update your membership. Ditching crapware is like uninstalling any other program, but these steps will make the process easier.

To clean up your PC manually, click *Start*, and navigate to the Control Panel. Double-click the *Programs and Features* button if you're in Classic View, or click the *Uninstall a program* text under the Programs heading if you're using the new Control Panel. Then select the program to remove, and click the *Uninstall/Change* text near the top of the screen. Be sure to remove all components if prompted.

Another option for getting rid of crapware is to download PC Decrapifier (find.pcworld.com/69411). It's a small program, and it's easy to delete after you've flushed your system. Run the PC Decrapifier application file and read through the first few screens until you reach the screen titled 'Select Items'. Then you can begin to sort through the software that PC Decrapifier has identified as possible junk.

BE CAREFUL: PC Decrapifier has trouble distinguishing between paid and trial software. If you've upgraded or manually installed any of the applications it lists, deselect those programs so that PC Decrapifier does not eliminate them.

Now enjoy your crap-free PC.

—Wes Simons

Avoid ADS ONLINE

ADS HAVE MADE Web browsers weapons of mass irritation, but free downloads can help calm the siege. The Firefox extension Adblock Plus has added a Chrome-compatible version, and Google's own Toolbar Pop-Up Blocker is another effective choice. Or you might fork over $20 to $30 for programs like Ad Muncher or Super Ad Blocker, which block advanced ad formats, and detect and remove spyware (these two and Adblock are in PCWorld.com's Downloads library). A third approach is SRWare's Iron (find.pcworld.com/71991); it's built on the open-source Chromium Web browser, but with more privacy controls.

—Jordan Crucchiola

BREAK YOUR SMARTPHONE CONTRACT

You want out of your cell phone contract, but you want out for free. Here are some tips:

1 Find someone to take over your contract. Websites such as cellswapper.com and celltradeusa.com connect people looking to get out of and into plans with all major providers and many smaller ones. Keeping your phone number may be impossible, depending on your carrier's policies.

2 If your provider makes a "materially adverse change" to your contract by charging more for the same services, you might be eligible for free contract termination. But after the changes go into effect, you have only a short time to take action, and you must prove that you use the service enough to warrant the material-adversity complaint. (Details are at find.pcworld.com/71981.)

3 Last resort: Try roaming. If your plan has free voice roaming, you'll be billed at your standard rates when making calls on other networks, but your carrier must pay those networks for those minutes. At some point, your carrier might boot you. Using more than half of your monthly minutes from a roaming spot may do the trick. (See find.pcworld.com/71982 and find.pcworld.com/71983.)

—Jordan Crucchiola »

Try Keyboard Shortcuts

Ditch the mouse and give the keyboard a workout instead. In Windows operating systems and Gmail, shortcuts can raise your mileage. For Gmail, be sure to click *Options* (the cam icon), then *Mail settings*, then *Keyboard shortcuts on.* —*Megan Geuss*

Windows Programs

Command	Function
<Ctrl>-<Esc> or <Windows>	Open the Start menu
<Ctrl>-X, C, V	Cut, copy, paste
<Ctrl>-B, U, I	Bold, underline, italic
<Ctrl>-Z	Undo the last command
<Ctrl>-W	Close the top window
<Ctrl>-A	Select all the items in the current window
<Ctrl>-[or] in Word	Reduce ([ ) or enlarge ( ]) text
<Ctrl>-1, 5, 2 in Word	Create single, 1.5, or double line spacing
<Ctrl>-1 in Excel	Format cells
<Ctrl>-S	Save
<Ctrl>-O	Open a document or program
<Ctrl>-<Tab>	Toggle through an app's windows or a browser's tabs
<Alt>-<Tab>	Switch to another running program
<Windows>-R	Run program
<Shift>-<Tab>	Move to the previous control in the window
<Shift>-<Delete>	Delete an item permanently (without placing it in the Recycle Bin)
<Shift> five times	Customize the <Shift>, <Ctrl>, <Windows>, and <Alt> keys to optimize for shortcuts
<Windows>-L	Lock your computer's screen
<Windows>-D	Hide and return to all open windows

Gmail

Command	Function
C	Compose a message
J, K	Move the cursor to an older or newer conversation
N, P	Move to the next message or previous message
#	Delete message
R, A, F	Reply, reply all, forward
<Tab>, then <Enter>	Send message
U	Return to conversation list
S	Star a message
!	Report as spam
<Ctrl>-S	Save draft
O or <Enter>	Open a selected conversation
/	Move the cursor to the search bar
M	Mute a conversation, unless a message is sent directly to you
+ or -	Mark a conversation as important or unimportant
<Esc>	Escape from input field
V	Move the conversation to a different label
<Shift>-I or U	Mark a conversation as read or unread
.	Show more actions
?	Show Keyboard Shortcuts Help

PHOTOGRAPH: ROBERT CARDIN

DISPOSE OF YOUR OLD PC OR SMARTPHONE SAFELY

Buying new tech is always fun, but finding a way to ditch old tech isn't. Simply deleting data doesn't always remove it from a PC or smartphone, and you never know who might wind up with your discards. These tips and resources can help.

- Before you start erasing data, don't forget to migrate it from the old device to the new. If you're buying your tech new or in a store, you will usually have access to a free data-migration tool, or the provider will help you transfer your files.
- Once that transfer is done, decide how sensitive your data is. You can destroy the phone or hard drive with a hammer or power drill. (Wear protective gear.)
- Don't have a taste for destruction? If you've stored a lot of private data on your computer, you'll want to render the operating system completely unusable. A drive-erasing program such as DBAN will overwrite every section of your hard drive several times over. When you download DBAN (find.pcworld.com/71984), it lets you burn a bootable "nuking" file to a CD. You then boot the PC from the startup disc, and the program will destroy anything in its path.
- If you don't have a lot of personal information on a PC, and you want to donate it to a local school or sell it on eBay, you can overwrite the machine's information without destroying the operating system by downloading a "file shredder" program that will overwrite selected data with random 1s and 0s. This way, your operating system stays intact, but most of your information is inaccessible.
- Smartphones contain lots of data nowadays; at a minimum, do a factory reset through the phone's menu before you sell or donate the handset. And take out the phone's SIM card and MicroSD card. Some apps, like the iPhone's iErase, will write over your phone's deleted data with random 1s and 0s.

—Megan Geuss

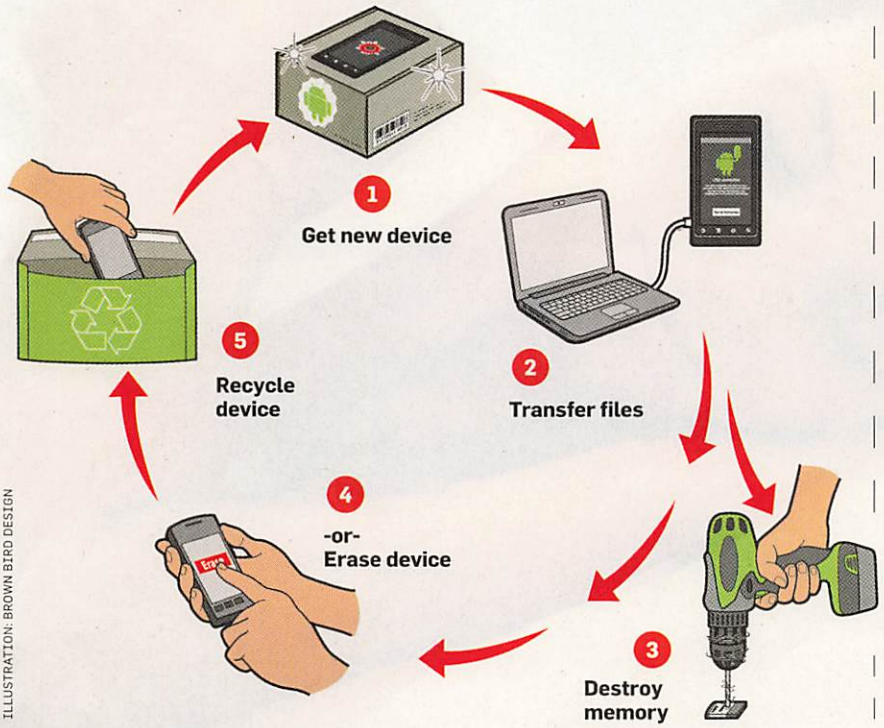
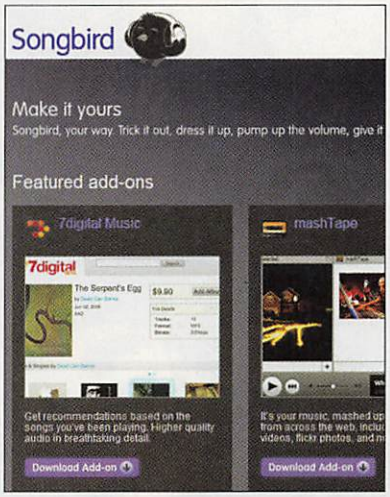


ILLUSTRATION: BROWN BIRD DESIGN


Songbird
Make it yours
Songbird, your way. Trick it out, dress it up, pump up the volume, give it
Featured add-ons
7digital Music
mashTape
7digital
The Serpent's Egg
$9.99
Get recommendations based on the songs you've been playing. Higher quality audio in breathtaking detail.
Download Add-on
Download Add-on

Drop iTunes

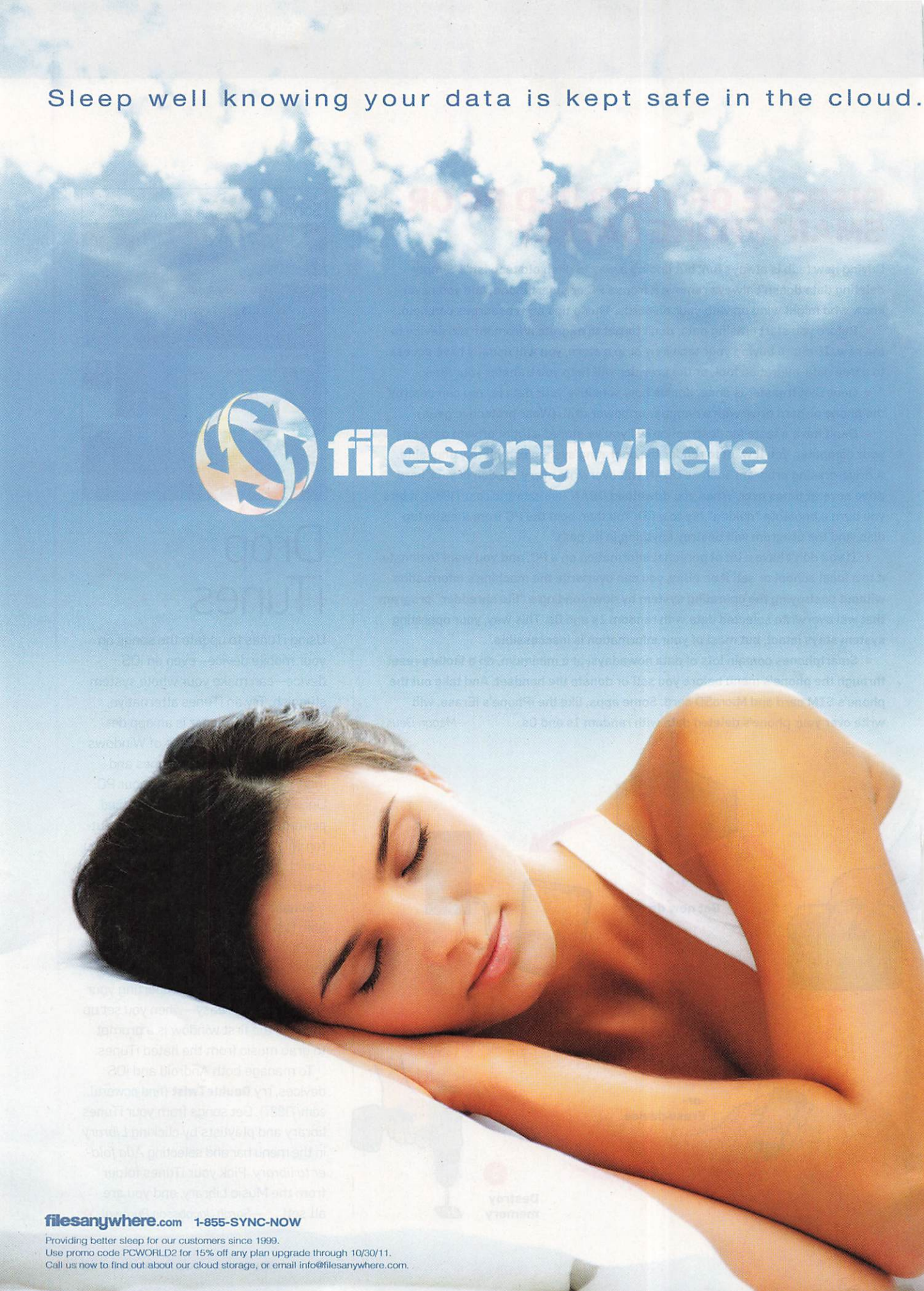
Using iTunes to update the songs on your mobile device—even an iOS device—can make your whole system sluggish. Try an iTunes alternative.

CopyTrans Manager is an app designed for newer versions of Windows that helps you update iPhones and iPods without slowing down your PC. Once you download CopyTrans (find.pcworld.com/71985), the add-track button will open a 'Select file' box, and you can choose your iTunes folder to download into the CopyTrans library.

Songbird (find.pcworld.com/71986) is both PC and Mac capable, and supports a variety of non-iOS devices. Songbird lets you upload a wide range of music and video formats, and importing your iTunes library is easy—when you set up the app, the first window is a prompt to grab music from the hated iTunes.

To manage both Android and iOS devices, try **DoubleTwist** (find.pcworld.com/71987). Get songs from your iTunes library and playlists by clicking *Library* in the menu bar and selecting *Add folder to library*. Pick your iTunes folder from the Music Library, and you are all set! *—Sarah Jacobsson Purewal* »

Sleep well knowing your data is kept safe in the cloud.



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Providing better sleep for our customers since 1999.
Use promo code PCWORLD2 for 15% off any plan upgrade through 10/30/11.
Call us now to find out about our cloud storage, or email info@filesanywhere.com.

PREPARE YOUR PC FOR 3D

Configuring your desktop system to handle 3D gaming and video playback is easy. In fact, if you've purchased or built a new computer with a graphics card in the past year, you may be just about set for action already.

HERE ARE THE THINGS YOU'LL NEED:

- **120Hz monitor or 3D TV**
- **3D glasses:** Active-shutter or polarized 3D glasses are fine, and graphics cards tailored to either option are readily available.
- **Graphics card:** Intel's Sandy Bridge processors can play 3D video without a discrete graphics card, but for 3D gaming or a large display, you'd better pony up for dedicated graphics hardware from AMD or Nvidia.

Nvidia's minimum specs call for the GT 200 or GeForce 8 series. For Blu-ray playback, you'll need to move up to a GeForce 200–series card or better. Nvidia offers bundles that include 3D glasses and an infrared emitter.

Anything from the AMD Radeon HD 5450 up is compatible with AMD's HD3D ecosystem. AMD also supports various forms of active and passive glasses technology, but different models require different technologies.

- **Blu-ray player:** Various Web destinations, including YouTube, serve 3D video, but most 3D video content today is on Blu-ray. A typical Blu-ray drive currently costs between $60 and $100.

—Nate Ralph

Create Your Own Mobile App

Want to design a simple mobile app that will work on iOS or Android phones and tablets? Visit **Appsbar** (appsbar.com), and it will help you do so for free (you can't use it to build apps that cost money, though).

With Appsbar you define the basic type of app (small-business, company, personal, lifestyle, or whatever) and set a few simple graphical options (splash screens, backgrounds, app icon, color scheme). Then you can set up different subsections for your app. Once you're done, click *Publish*, and Appsbar will automatically handle the Apple App Store/Android Market approval process—and if your app is at risk for getting rejected, they'll tell you how to fix it. *—Patrick Miller* »

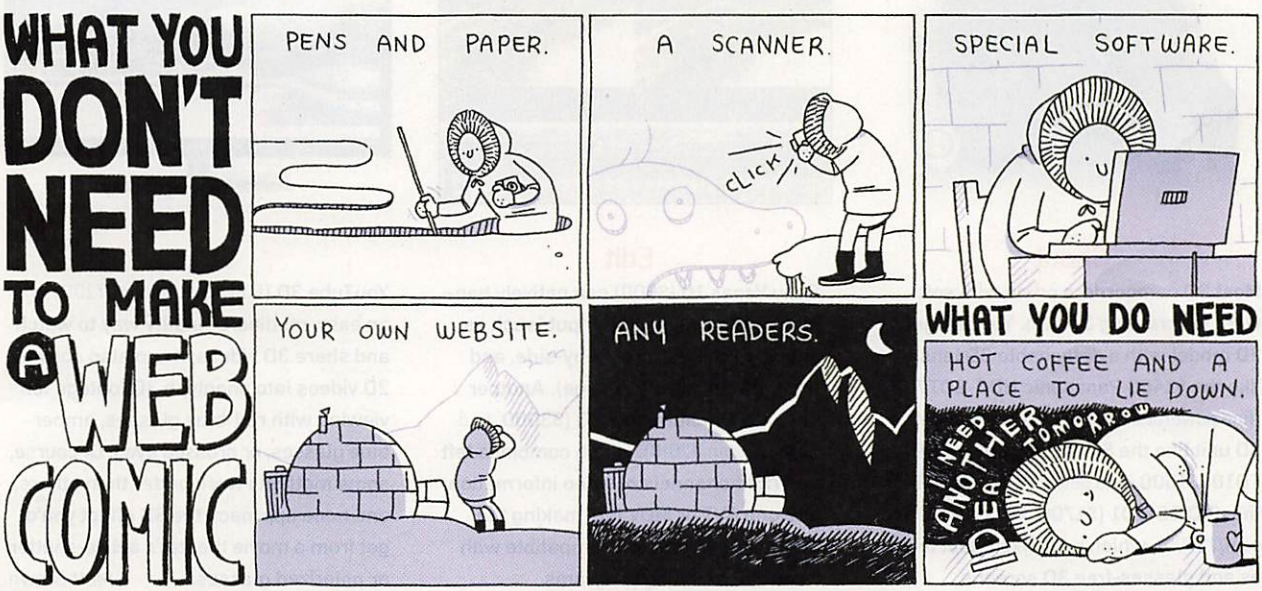


ILLUSTRATION: DOROTHY GAMBRELL

Start an Internet Radio Station

Here are three ways to make your impeccable taste in music available to all or part of the Internet.

1 **Set up a Shoutcast server:** With any modern PC, you can use Winamp (find.pcworld.com/72003) to collect and play your music, the Edcast plug-in (find.pcworld.com/72004) to turn it into a streamable audio feed, and Icecast2 (find.pcworld.com/72005) to send it out to the Net. For details, see find.pcworld.com/72006.

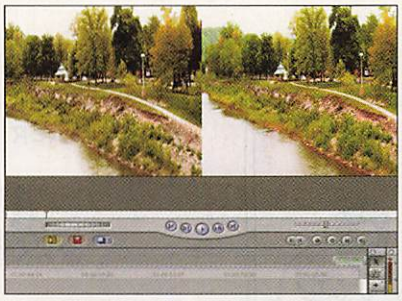
2 **Use one cable and a streaming service:** Plug a 3.5mm male-to-male RCA audio cable into your headphone jack and your microphone jack. Play music on your PC while your Web video-streaming service account is live, and share the link to your stream with your friends.

3 **Try Turntable.fm or Outloud.fm:** Both of these Web apps combine a chat room with an MP3 player for sharing music. *—Patrick Miller*

SHOOT, EDIT, AND SHARE 3D VIDEO

Shoot

Most 3D camcorders come with software for creating 3D film. You can get a 2D model with a detachable 3D lens like the $1400 Panasonic HDC-SDT750 (find.pcworld.com/72007), or a dedicated 3D unit like the Sony Handycam HDR-TD10 ($1500, find.pcworld.com/72008) or the JVC GS-TD1 ($1700, find.pcworld.com/72009), which have fixed dual lenses and glasses-free 3D screens.



Edit

Sony Vegas 10 ($600) can natively handle several types of 3D input (such as separate channels, side-by-side, and top-and-bottom 3D footage). Another option is Cineform Neo3D ($3000, find.pcworld.com/72010), which combines left and right channels of video information into one AVI or MOV file, making the dual-channel footage compatible with most video-editing programs.

Share

YouTube 3D (find.pcworld.com/72011) is an easy, mediocre-quality way to watch and share 3D videos; it can also convert 2D videos into anaglyph 3D footage for viewing with red-blue glasses, amber-blue glasses, or crossed eyes. Of course, some methods work better than others, and none approach the 3D effect you'd get from a movie theater's active-shutter or polarized glasses. *—Matt Brown*

PHOTOGRAPH (RIGHT): ROBERT CARDIN

CUSTOMIZE YOUR PC TO LOOK LIKE A MAC

1 Add a dock: With RocketDock (find.pcworld.com/72012), your Windows 7 PC can mimic Mac OS X's dock. Before downloading and installing RocketDock, right-click the taskbar, uncheck *Lock the taskbar*, and move it out of the way. Then hide it by right-clicking it and selecting *Properties•Auto-hide the taskbar*.

2 Move things to the left: Mac OS X puts the minimize, maximize, and exit buttons on the left side of windows instead of on the right. To replicate this layout in Windows 7, use an app called Leftsider (find.pcworld.com/72059). Simply download and install Leftsider, and all your buttons will be on the left.

3 Skin it: Download and install David Pieron's Mac OS X Lion Inspirat for CustoPack Tools (find.pcworld.com/72013). Then download and install his Mac OS X Lion Inspirat (find.pcworld.com/72014) for a RocketDock, 90+ Mac-inspired icons, and Mac startup sounds and screens. *—Sarah Jacobsson Purewal*

Fund Your Pet Projects

Here are some tips on using Kickstarter to raise money for your killer app.

What is Kickstarter? It's a "crowdfunding" site. You explain (in text or video) your project, and online Good Samaritans can make donations toward funding it. Kickstarter uses an all-or-nothing model: You must set a funding goal at the beginning of the project, and you get funded only when you meet or exceed that goal.

PICK THE RIGHT PROJECT: Kickstarter is ideal for projects that cost too much for you to fund by yourself but don't justify a traditional business startup. The top-funded project on Kickstarter to date is Scott Wilson's TikTok and LunaTik, a pair of watch straps that fit the iPod Nano; it raised over $940,000 in 30 days.

IDENTIFY DONATION TIERS: A good Kickstarter campaign sets suitable "donation tiers" that reward people who donate a certain amount with anything from mugs to film credits to special supporter-only editions. Set your donation tiers strategically, and you might be able to coax extra cash out of your donors—or even land a big fish.

ENGAGE YOUR DONORS: Communicating with your donors is important. A donation isn't like a simple cash transaction—people are giving you money to do something because they feel like they're a part of your project. Share insights about your project while it's happening, to keep your donors clued in. You can do this from the Updates blog in your Kickstarter project page. *—Patrick Miller*

PRINT A 3D OBJECT

3D printers, which print three-dimensional objects the way a PC printer generates pages, are very expensive. But sites such as **Shapeways** (shapeways.com) use their own 3D printers to make objects for you on demand.

Creating models with Shapeways' tools is easy, even for a beginner. I created and ordered a 3D model of our *PCWorld* logo in about 20 minutes, by uploading a copy of the logo and entering dimensions in the site's pop-out tool. Veteran 3D modelers can work with almost any modeling tool they like.

You can use any of various formats to upload an existing 3D model that you want to print. After you upload the file, Shapeways will confirm that the model is valid for printing (it must be a single object, and its hanging edges can't exceed a certain length). If it passes muster, you can then preview and buy in minutes. The site also lets users sell copies of their models. *—David Daw* »

GEEKIFY YOUR WARDROBE

Why bother with Twitter when you can broadcast your own message to an amazed world, right above your crotch? All you need is this **ThinkGeek Scrolling LED Belt Buckle II** ($10 to $30). find.pcworld.com/72016

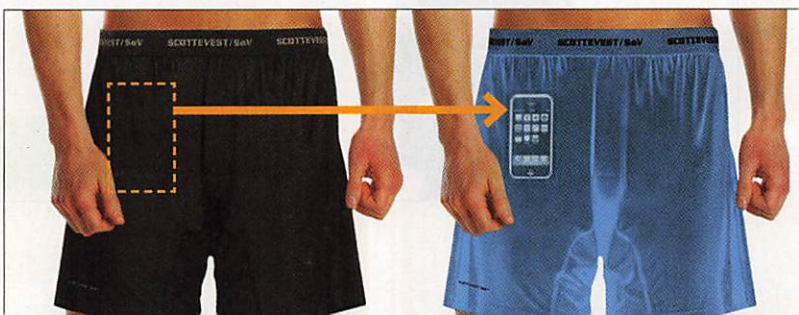
These **North Face Paramount Peak Convertible Pants** ($65 to $75) don't scream "geek!" until you unzip the legs to use them as shorts. Now you're ready for anything. find.pcworld.com/72015

Where are the Wi-Fi networks? The $15 **ThinkGeek Wi-Fi Detector Shirt** can show you. Batteries not included. find.pcworld.com/72017

No geek outfit is complete without a set of killer kicks. We'd love to get our hands on Gabriel Dishaw's one-of-a-kind **Blazer Pentium 1.0 shoes**—but sadly, someone else already snapped them up. find.pcworld.com/72018

With 22 pockets (including an iPad-size pocket), the **ScotteVest Travel Vest for Men** ($100) can inconspicuously store your personal tech—and it comes complete with built-in cable-management features. find.pcworld.com/72020

For closer intimacy with your smartphone, put it in the iPhone-size pocket of these **ScotteVest travel boxers** ($20)—and never again worry about losing track of it. find.pcworld.com/72019 *—Patrick Miller*



Whip Up S'mores Inside Your Desktop PC

You can use your PC for gaming, video processing, or Web surfing. How about cooking? Let's make s'mores.

DISCLAIMER: We're showing you how to cook in your PC by running a CPU without any cooling system in place. If you try this yourself, you'll risk frying your CPU and melting food items near important electrical components. You have been warned.

1 For this experiment, you'll need small graham crackers, Hershey's Miniatures, mini marshmallows, and aluminum foil to create the "pan." For the pan, I took a small piece of aluminum foil and fashioned it into a tiny boat to hold my s'mores by curving up the edges of the squared piece. Flatten out the bottom of the holder as much as possible—the larger the area of foil in contact with the hot chip, the better. Just remember not to make the pan too big; otherwise, it could carry current between two motherboard leads (which is exactly what happened in my experimental setup when I made that mistake—oops).

2 To simplify things, I started by unplugging the entire CPU contraption from the motherboard, and cleaning off the filthy, thermal-paste-covered processor with a two-step ArtiClean solution from Arctic Silver. Then I carefully mounted my pan, dropped in two marshmallows, and fired up the system. My PC won't boot if the temperature is too high, so I reapplied the CPU's cooler and heatsink, started up Windows, and then grabbed a little freeware application called RightMark CPU Clock Utility (cpu.rightmark.org), which lets you change the CPU's multiplier and frequency from within Windows. Think of it as a temperature knob.

3 Next, I adjusted the voltage and multiplier of my AMD chip until I obtained settings—1.050 volts and a multiplier that generated a 1.0GHz clock speed—that left me with a stable CPU of approximately 95°F. Finally, I put a bar of chocolate on top of the two marshmallows. The chocolate took about 10 minutes to heat up, but eventually it began spreading over the semisquishy marshmallows. Once the molten mass achieves the desired viscosity, scoop it up and deposit it between two graham crackers, and you'll have your very own CPU-cooked snack.

—David Murphy

Ingredients:

- Graham crackers
- Mini chocolate
- Mini marshmallows
- Foil pan

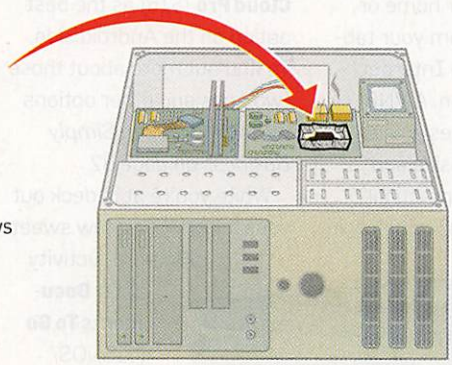
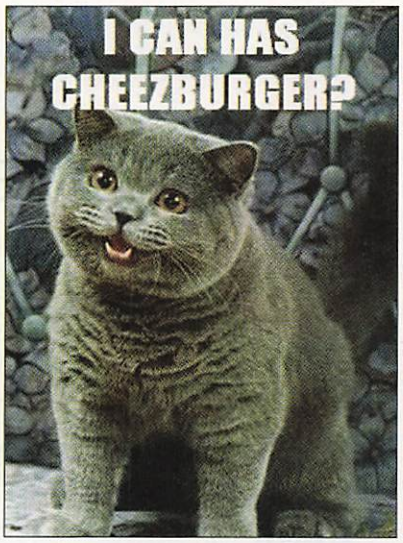


ILLUSTRATION: BROWN BIRD DESIGN



Post a LOLCat

Want to make a cute, captioned kitty photo that everyone loves? Then you need to know the ropes. Here's how to create your own purebred LOLCat.

First, find a cute or funny picture of a cat or other animal. Hit up Flickr for photos covered by the Creative Commons license, or try I Can Has Cheezburger's extensive database in the LOLCat Builder (cheezburger.com/Builder).

Next, write a funny "capshun" to go with your cat picture. Be sure to write it in LOLCat-speak: Spell words phonetically, never punctuate, use fractured grammar, and include "oh hai" frequently. If LOLCat writer's block strikes, start with one of these phrases:

i can haz [noun]
im in ur [noun] [verb]ing ur [noun]
invisible [noun]
all ur [noun] are belong to us/me

For a proper LOLCat, change your capshun font to Ariel Black or Impact, and make it white with a black outline. To produce this black outline in Photoshop, select *Blending Options•Stroke*, set 'Stroke size' to *1*, and switch Color to *black*. *—Sarah Jacobsson Purewal* »

Start a Tech Rumor

Do you have an **iOS device?**

No → **BUY ONE!** No one cares about non-Apple tech rumors.

Yes → **iPod/iPhone**

Create an unlock-screen background that reads **"iPad Nano Prototype"** Leave it in a Silicon Valley bar.

Wait for a blogger to find it.

Yay!

Which one?

iPad

No → Use an Android desktop screenshot as your unlock screen. Snap a picture of the iPad with the screen on. Post the image on Twitter with the caption **"iPad 3 to dual-boot Android?"**

Did your post get **retweeted** by any popular tech gossip/rumor blogs?

No

Yes!

Do you have a 5-megapixel (or better) camera to take a picture of your iPad?

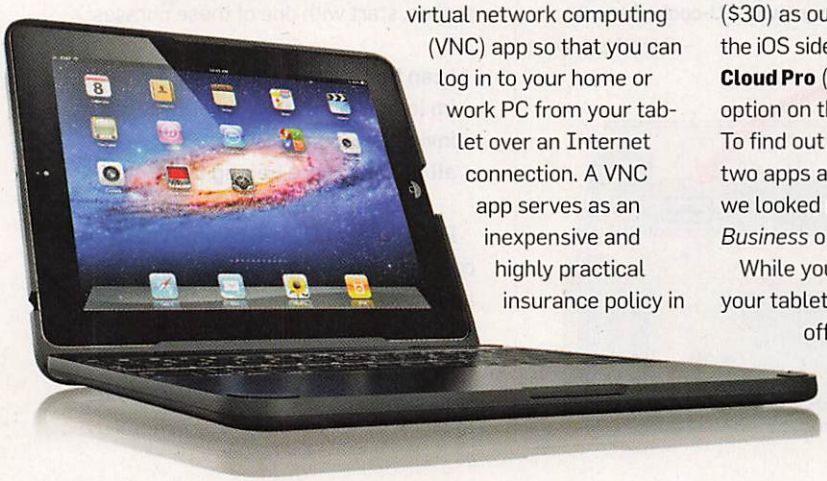
Yes → Put the iPad in a dumb-looking case. Take a picture of it. Send the picture to every major tech publication in an email titled **"iPad 3 Prototype Spotted in the Wild."**

For bonus points, spoof the email address of a popular tech pundit.

Congratulations
You've started your own tech rumor.

REPLACE YOUR LAPTOP WITH A TABLET

Tablets are slick, lightweight, and fast (some of them are, anyway). No wonder they're the new tech hotness. But if you still can't imagine letting go of your beloved laptop, here are a few tips to help make your transition to a tablet easier.



First, be sure to get a good virtual network computing (VNC) app so that you can log in to your home or work PC from your tablet over an Internet connection. A VNC app serves as an inexpensive and highly practical insurance policy in case you run into an application or website that your tablet can't handle. In a recent roundup of remote-login apps, we rated **LogMeIn Ignition** ($30) as our top choice on the iOS side, and **Wyse PocketCloud Pro** ($15) as the best option on the Android side. To find out more about those two apps and other options we looked at, see *Simply Business* on page 32.

While you're at it, deck out your tablet with a few sweet office-productivity apps: **Documents To Go** ($15, iOS/Android) and **Quickoffice HD** ($15, iOS/Android) should cover basic office-document writing and editing needs.

iPad owners who pine for a laptop's physical layout (and its hardware keyboard) might like the $120 **ClamCase**, which functions as an all-in-one iPad case, stand, and Bluetooth keyboard (accessories that you'd probably buy anyway) and resembles a laptop. With the ClamCase, you can switch to a standard laptop layout whenever you need to buckle down and get serious work done.

—Patrick Miller

PRODUCE A FREE PODCAST

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Post You'll need a file server to host your podcast so your audience can download it to their listening device of choice. Try PodBean (podbean.com), a free podcast publishing platform, which offers 100MB of server space and up to 5GB of bandwidth every month for free. *—Alex Wawro*

ILLUSTRATION: I LOVE DUST

Set Up a Home Server

Here's how to make Windows Home Server 2011 work for you.

Initial setup: First, boot your server PC from the install disc. The Windows Home Server routine resembles Windows Setup, but we hit a snag at the end of the automated process: The system lacked a built-in driver for the gigabit ethernet controller, which prompted an error message/reboot loop. If this happens to you, press **<Ctrl>-<Alt>-<Delete>** during the 'configuring Windows' screen with a progress bar, open the Task Manager, and kill the setup process. Windows will unceremoniously dump you to the desktop, at which point you can install the chipset and network drivers.

Configuring a client: You don't have to use a CD or a thumb drive to configure a client. Instead, open a browser and type the URL **http://***<homeservername>***/connect**, replacing *<homeservername>* with the name that you assigned to the server during setup. Next, download and run the Windows Home Server connector installer. If you have automatic logon configured, you'll have to revert to login-required mode; the WHS connector app will launch it for you. At that point, you must reboot and then run the connector setup app again.

Once you've installed the Windows Home Server connector, run the Launchpad app. The first time you perform this step, you'll need to run the Windows Home Server Dashboard. After you've set up WHS, Launchpad and Dashboard become two different animals. You should set up a user account that isn't the same as the system administrator account; give it a different password so that you can work exclusively with your file shares.

GLOBAL SERVER SETTINGS

Now that your first client and server are up and running, you'll want to tweak some server settings in particular.

Media: Streaming quality depends on the performance of your CPU; unfortunately, figuring out which setting to use is difficult. Generally speaking, if you're using a Core i3 or better processor, you can probably safely adjust the setting to 'Best'.

HomeGroup: Add your server to your Windows 7 HomeGroup (if your network already uses a HomeGroup), so that the other computers on the network can access it more easily.

Remote Web access: If you have your own domain, you can make the Windows Home Server system part of it for remote access. Your choice of domain-name providers is limited to GoDaddy.com and eNomCentral.com, however.

That's it for a simple Windows Home Server installation and configuration, though your installation may require additional steps such as pointing DLNA clients to the new server, configuring backups, or finding add-ins. At this point, though, you have all of the basics set up and ready to go. *—Loyd Case* »

Add a Second Monitor

1 Check to see whether your graphics card supports multiple monitors: If it has more than one input port, it probably does support more than one monitor.

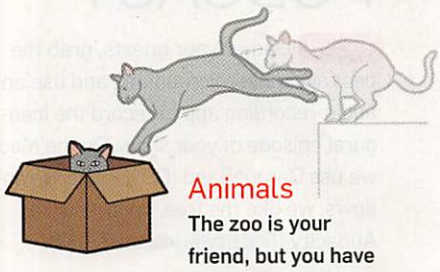
2 Plug two (or more) monitors into your graphics board: Ideally, the monitors will be identical in size, resolution, and type. If you must compromise, make similar size and resolution your priorities, and don't insist on similar type.

3 Turn on your PC: Both monitors should turn on by the time you reach the Windows login screen; by default they should show the same image (an arrangement called *mirroring*).

4 Navigate to and adjust the settings: Right-click on the desktop and go to *Personalize•Appearance and Personalization•Display Settings*. You'll see a diagram showing your monitors, each of which will be identified by a number. Drag the monitors in the diagram into positions that match the physical layout of your setup, and choose which monitor will serve as your main monitor. Once you've selected your main monitor, click the other monitor and set the drop-down menu option to *Extend the desktop onto this monitor*.

5 You're all set! Grab DisplayFusion (find.pcworld.com/72025) to add neat multiple-monitor features (such as different desktops for each monitor), and add a few attractive Windows Live Widgets (gallery.live.com/) that will take advantage of some of that extra space. —*Sarah Jacobsson Purewal*

AUTHOR YOUR OWN VIRAL VIDEO



Animals

The zoo is your friend, but you have to be patient. Just train your camera on a promising critter, and hope for the best. A panda with seasonal allergies (find.pcworld.com/72026) or a rodent with a penchant for the dramatic (find.pcworld.com/72027) can be comedic gold. Pets—especially cats, especially in association with empty boxes—are endlessly (and virally) amusing, too.

Parody

When in doubt, redo something that someone cleverer than you has already done. With a little spin, you can turn another person's massively popular Web sensation into a slightly less popular ironic restatement. Unfortunately, it still takes talent and foresight to recognize and grab opportunities for satire. And being first to the punch is critical. The 84th "Leave Britney Alone" parody is never as funny as the first—not that that should stop you.

Singing

YouTube was made for short clips, and the pinnacle of that genre is the music video. The catch: Unless you're a professional (and if you don't know whether you're a professional, we can assure you that you're not), the worse you sing, the more popular you're likely to be. Lyrics are important, too—especially if they're absolutely horrible.

Injury

America's Funniest Home Videos is now in season 21, and that show is nothing but nut shots. Injuries are a popular video subject because any no-talent schlub can tumble down a flight of stairs, fail to jump a motorcycle over a house, or skateboard straight into a Dumpster. The key is to maintain an absurd air of confidence right up until the moment of disaster. —*Christopher Null* »

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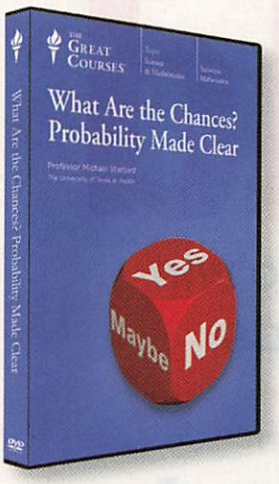

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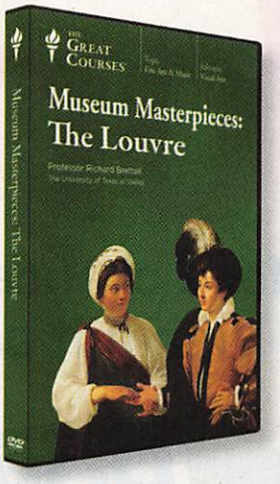

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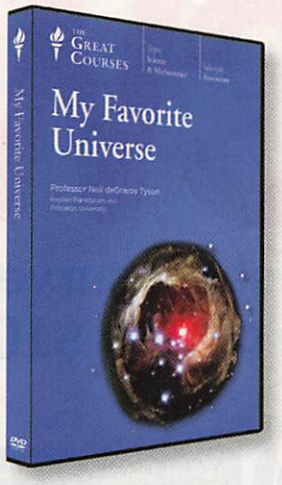

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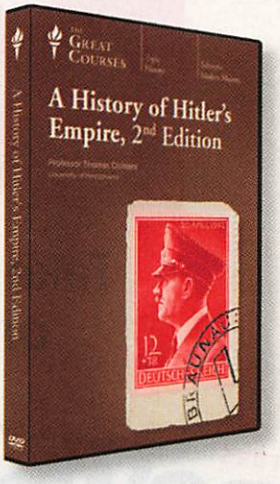

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TWEET LIKE A SUPERSTAR

Stay interesting: Being smart, opinionated, and entertaining will get you followers. Revealing the details of your breakfast will not.

Be focused: Love motorcycles? Then tweet about them. Not to the exclusion of everything else, but having a speciality or two helps.

Mingle: Treat Twitter like an ongoing conversation—retweet other folks, ask and answer questions, and share interesting stuff.

Find a rhythm: You shouldn't tweet 50 times an hour. But there is such a thing as undertweeting. A few updates every day makes sense.

Don't autotweet: People like to follow other people, not bots, so nix services that tweet trivia such as your game scores.

Spread the word: Stick your Twitter info on your Facebook page, in your Linked In profile—even on your business card.

Check your stats: Klout (klout.com) and PeerIndex (peerindex.net) rate your influence. You don't need scads of followers to do well.

—Harry McCracken

Harry McCracken, the former editor in chief of PCWorld *and the founder and editor of Technologizer.com, is known to his 32,136 followers as @harrymccracken.*

Reach Tech Support Faster

Calling customer service or tech support doesn't have to mean spending your day hearing Lady Gaga hits performed by the London Muzak Orchestra.

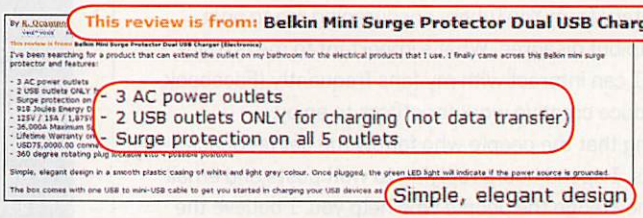
1 Beforehand, go to **Dial A Human** (dialahuman.com) or **GetHuman** (gethuman.com), which list phone numbers and button sequences that can get you to a real live voice. Once you connect, be nice, and the rep handling his or her 500th call may actually want to help you.

2 If you have the option of instant-messaging a rep, it could help the conversation go more quickly. You'll have no accent or dialect issues over IM. For computer hassles, you can attach screenshots that illustrate the problem, so you can avoid trying to explain your nightmare over and over again.

—Jordan Crucchiola »

RECOGNIZE FAKE PRODUCT REVIEWS

MARKETING-SPEAK: Real reviewers don't usually rattle off endless lists of features; they're more likely to concentrate on how the product performs.


This review is from: Belkin Mini Surge Protector Dual USB Charger (Electronics)
- 3 AC power outlets
- 2 USB outlets ONLY for charging (not data transfer)
- Surge protection on all 5 outlets
Simple, elegant design

FISHY REVIEWERS: Check a reviewer's history. Is this their only review? Have they given high ratings to all of the company's products?

—David Daw

OVERLY POSITIVE REVIEWS: Even if they absolutely love a product, most real reviewers will temper their praise with some caveats.

GRAB ATTENTION FOR YOUR YOUTUBE VIDEOS

When I shot the very first episode of "My Drunk Kitchen," I was simply video-chatting with my former roommate. I found a "free" bottle of my sister's wine, and then I told my friend that I would make her a video of what a cooking show looks like on YouTube. Before long I found myself with an eclectic group of fans and followers asking for more.

So when people ask me to give them some advice on how to get famous and make it big on YouTube, I really can't offer them much. In my limited experience, however, these are the lessons I have learned.

1. **Be a good friend so that people repost the video because they like you.**
2. **Be patient.**
3. **Get a second pair of eyes, and be open to multiple drafts of your work.**
4. **Don't be afraid to work hard.**
5. **Never post anything you're not proud of.**
6. **If you're making comedy, never post anything that doesn't make you laugh out loud—with your body.**

I've gotten a lot of commentary from YouTubers encouraging me to post content constantly. I can't help but disagree. What's important to me is managing a creative outlet where I can interact with my fans frequently (Facebook, Twitter), and where I can produce creative work for others to enjoy.

I'd say my priority is ensuring that the people who follow me get feedback and interaction on a daily basis. I spend hours replying to wall posts and email because it's important to acknowledge the people who help you. I believe the Internet is driven by relationships and connectivity. Be open to both.

—Hannah Hart (HartoAndCo.com)

Dig Up Info on People

When you start looking at people-search sites, you quickly discover two things: All of them are creepy, and most of the search results at "free" sites lead you to other sites where you have to pay to get the information.

Most people don't want to pay anything just to find out what their old high school crush is up to. So I tried a number of people-search sites—including Pipl.com, Spokeo, and ZabaSearch—to determine which one offered the most free information on me. The winner was Spokeo: Its profile showed my age, address, and phone number, along with a picture of my house. (Creepy, right?) On top of that, it had the cost of my house, my marital status, and even my zodiac sign. And it provided a demographic profile of my neighborhood. Of course, not everything was correct: Spokeo alleged that only one adult lives in my home. There are days when my wife would agree with that statement, but it's not strictly true.

You might find it worthwhile to check at other people-search sites to see if they have any information that the first site missed. But keep your guard up: The search results I got at Pipl, for instance, were so cluttered that I found it tough to tell the ads from the information.

—Edward N. Albro

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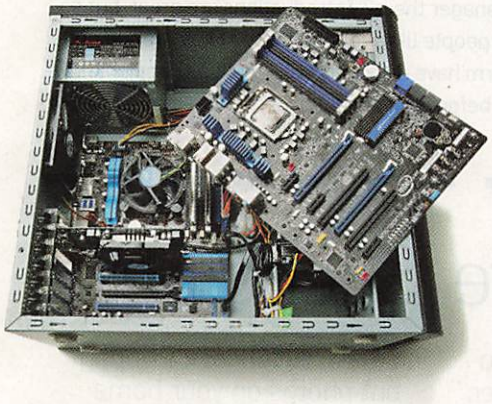

Computer Parts

If you pay attention and move fast, both Freecycle (freecycle.org) and your local Craigslist have free computers and components that people are throwing out. They won't be top-of-the-line, but they'll probably work.

Movie Tickets

If you're willing to stand in line, sites such as Film Metro (filmmetro.com) can help you get complimentary tickets to screenings in your town.

Books

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—David Daw »

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Offers

AbsurdlyCool.com is a great aggregator for free offers. The offers usually don't cover more than a bag of candy or a drink, but hey, they're free.

PHOTOGRAPHS: ROBERT CARDIN

LAND A NEW JOB THROUGH SOCIAL NETWORKING

EVER SINCE THE first Neanderthal helped a fellow knuckle-dragger join an elite woolly mammoth hunting team, humans have been using their contacts to get jobs. Online services such as Facebook and LinkedIn have simply made the process a little more efficient. To achieve the best results, you have to start developing your social network in advance, before you're looking for employment.

Before You Need to Find Work, Make Your Online Presence Presentable

- Update your profiles on Facebook, LinkedIn, Twitter, and other networks so that they're current and they all agree.
- Connect with people who might be able to help you in the future. The worst time to restart a relationship is when you're desperate for help in a job hunt.
- Participate—write blogs, tweet, and interact with friends so that future employers see that you "get" social media.

Once You're Looking, Tap Your Friends

- Ask pals to look for positions at their company that may suit you. Tell them what you're doing, and what you're good at.
- Connect any job you're interested in with a contact. Do you know someone who works at the company, or used to? Does a friend know a manager there? Introductions are great, but so is inside info: Do people like working there? How are the benefits? Does the firm have a good future? You'll be happier knowing these things before you accept a job.

—Edward N. Albro

Print More, Spend Less

If you're interested in conserving printer ink or toner, follow these tips to get more out of each cartridge.

Print in draft mode: Check your printer's driver for its draft mode, which may be called "economode," "ink/toner-saving mode," or the like. Such modes consume less ink or toner while still creating a readable document that's adequate for casual use. Make the draft mode the default setting, if you can.

Use a thin font: Skip the serifs and the broad strokes. Choose a thin-lined, sans-serif font, such as Arial or Calibri, as the default for your text.

Use color sparingly: Nothing drains a cartridge like a solid block of color. Instead, use a half-tone or a simple border.

Farm out photos: Printing out photos on your home inkjet printer generally costs 25 cents to 35 cents per 4-by-6-inch photo (including paper). You can have your pictures printed by an online or in-store service for as little as 9 or 10 cents per shot.

Limit access: Many office printers have access controls that specify which users can print in color. You can disable color printing outside your regular business hours, too.

Go laser: Purchase a simple monochrome laser printer (with reasonably priced toner) for generating most documents. Use your inkjet, which will generally be more expensive to operate, only for prints that require color.

—Melissa Riofrio

PHOTOGRAPH: ROBERT CARDIN

PERSUADE PEOPLE TO 'LIKE' YOU ON FACEBOOK

Get more people to "Like" your Facebook page, and you'll increase your influence as well as your ability to spread your message. Here are some tips for gaining followers.

1 Ask contacts to Like your page, and show them how. Request that they ask people they know to Like you. Make it easy by including a link to your Facebook page in your electronic signature, and consider inserting a screenshot showing the recipient exactly where the Like button is; post the screenshot on your website, too.

2 Have fans already? Interact with them regularly, at least two or three times a day. Post a link to something you did or an item you find interesting. Write a one- to two-sentence comment, and inject personality. Note: Once you begin to interact, follow through continually. No one enjoys coming to a page that hasn't had an update in weeks.

3 Ask your followers for help, advice, or opinions regularly. Many of them crave interaction with you. Post small quizzes, ask them to respond specifically to a link, or ask how they would solve a problem you're facing. You'll be surprised at the quality of some of the answers.

4 Respond to Facebook page comments by commenting back. Everyone likes to be noticed.

5 Don't neglect to post appropriate photos and videos. They spice up the interaction.

Finally, I'll take a bit of my own advice: Stop by and Like *PCWorld*'s Facebook page at facebook.com/PCWorld.

—Anne B. McDonald

ILLUSTRATION: I LOVE DUST

Stay Private on the Web

Want to get some privacy, and browse the Web anonymously? Here are two quick tricks that can help you become a ghost in the machine.

Surf with a Web proxy: A free Web-proxy page such as Proxify (proxify.com/?security) masks your real location and prevents malicious snoopers from tracking you with cookies or monitoring your browsing history. As a bonus, browsing anonymously through a proxy eliminates most of the ads that clog Internet pages.

Browse with a Tor relay: Using a Web proxy isn't foolproof; a smart observer can still learn a lot about you and your habits by monitoring your network traffic, and your employer might block you from using Proxify or a similar service.

For true anonymity, try using the Tor Network, a worldwide group of servers running a program that encrypts your data and then securely routes all of your browsing through a random series of servers every time you load a page.

The free Tor browser bundle (find.pcworld.com/72002) includes an older version of Firefox with the Torbutton browser extension, enabling you to connect to Tor with one click and ensuring that your browsing is anonymized. For more details see *Privacy Watch* on page 40.

—Alex Wawro

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Volume 29, number 9. *PC World*™ (ISSN 0737-8939) is published monthly at $24.95 for one year (12 issues), $49.90 for two years (24 issues), $74.85 for three years (36 issues) by PC World Communications, Inc., 501 Second Street #600, San Francisco, CA 94107. Foreign orders must be prepaid in U.S. funds with additional postage. Add $10 per year for Canadian delivery; add $20 per year for airmail for all other countries. Canadian GST Registration #R124669680. Periodicals Postage Paid at San Francisco, California, and at additional mailing offices. Canada Post Publications Mail Agreement #40612608. Return undeliverable Canadian addresses to: Pitney Bowes, P. O. Box 25542, London, ON N6C 6B2. POSTMASTER: Send address changes to PC World, Subscription Dept., P.O. Box 37571, Boone, IA 50037-0571. Editorial and business offices: 501 Second St. #600, San Francisco, CA 94107, 415/243-0500. Copyright © 2011, PC World Communications, Inc. All rights reserved. The trademark PC World is owned by International Data Group and used under license by PC World Communications, Inc. Technology Advice You Can Trust™, PC World Top 10™, Top 10™, PC World Top 100™, Top 100™, and Consumer Watch™ are trademarks of International Data Group, Inc., and used under license by PC World Communications, Inc. Printed in the United States.

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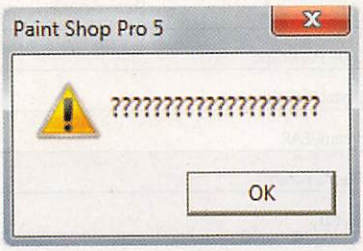
FROM OUR READERS

How About a Game of 20 Questions?



S.P. SIMMONS, FROM Los Angeles, had a very old version of Paint Shop Pro hanging around on her laptop. After she upgraded her machine to Windows 7 and tried to launch this ancient graphics-editing program, mayhem ensued.

No One Can Eat Just One

WHEN KENNY REEVES of Lake Charles, Louisiana, did a Google search for a replacement hard drive, he stumbled on this. The $4 price was tempting—but how would his laptop take all that vegetable oil?

Seagate ST950212A 50GB UDMA/100
Internal - IDE - 50 GB - Seagate
Ingredients: Potatoes - Vegetable Oil and/or Sunflower Oil) - Nonfat Milk Solids - Onion Powder - Nonfat Milk ...
Add to Shopping List

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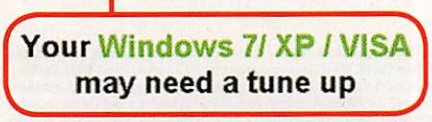
Daily Technology News
Our Top Stories
Messing With Google Street Views
Google+ Faces First Facebook Defense
Chrome Extension Imports Facebook Friends to Google+
Your Windows 7/ XP / VISA may need a tune up
Difficulty Level: Easy
Time Required: 2 minutes
Click "Start" To Begin
START >>
More Info

SUBSCRIBER RANDY STEVENS was impressed that an ad in *PCWorld*'s *Daily Technology News* newsletter offered a Windows 7 and XP tune-up, as well as a Visa adjustment.



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→ Government study: More people are texting while driving, despite laws against it. Next up: a law prohibiting obvious studies.

→ MIT prints solar cells on paper. The paper cells work great—at least up to 451 degrees Fahrenheit.

→ Apple denied injunction on Amazon's use of "Appstore." Will it amend suit to claim that Kindle actually alludes to sticks of applewood?

→ North Korea is training cyberwarriors at foreign colleges. Most prized degree: a B.S. in World of Warcraft.

→ Mouse receives the first genome therapy, cures hemophilia. Brilliant rodent says that it hopes to attend Stanford Medical School next. ●

—Steve Fox and Steven Gray

ILLUSTRATION: GARY NEILL

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